



THE FUTURE OF THE MARITIME PROVINCES:
AN APPLICATION OF THE DELPHI APPROACH

by

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B.A., Université de Moncton, 1964

B.Ed., Université de Moncton, 1972

AN EXTENDED ESSAY SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
in the Department
of
Geography



ADRIEN BÉRUBÉ 1975
SIMON FRASER UNIVERSITY

October 1975

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ABSTRACT

This essay argues that geographers should contribute more to futures research. The identification of consensus shared by people on desirable alternatives for change is shown to be a promising field of investigation for behavioral research, regional planning and geography teaching. The Delphi technique--a research procedure widely employed by "think tank" organizations but seldom by geographers in university departments--appears to be a powerful tool to this end. The methodology involves the use of experts in a situation of anonymous debate with the view of achieving a consensus of opinions relative to uncertain issues.

After reviewing the pertinent literature dealing with futures, the paper reports on a prototype study conducted in the Madawaska region, a French-speaking enclave located in North-Western New Brunswick. A group of college students and community leaders were enrolled in a Delphi-like experiment designed to explore how citizens view the geography of their region, how their understanding of the problems facing the region could be increased and what regional futures they apprehend as possible, probable and desirable.

In a preliminary exercise, the students identified 123 changes which might come about in the Maritimes. The list was then circulated to all participants who rated each change according to its perceived probability and expected date of occurrence and its foreseen acceptability to the people. The results were then collated and fed back to the participants who reviewed their earlier opinions and rated the changes according to their perceived social desirability.

The predictive power and substantive content of the resulting "collective forecast" are briefly analysed. Lists of likely and unlikely changes are produced using an index derived from the postulates of current futures models. The views of the Maritimes held by the student and non-student subgroups closely approximate each other. The sample is concerned with the quality of life based on increased mobility, decentralization and recreation opportunities, provincial rather than local or Maritime issues and agriculture and ocean resources rather than conventional industrialization.

A critical review of the experiment directs its replication in the same and in other culture areas for purposes of geographical theory building, education of the participants and "time prospecting" proper.

À Constance
À notre avenir

Regarder un atome le change
Regarder un homme le transforme
Regarder l'avenir le bouleverse

Gaston Berger

ACKNOWLEDGMENT

The author expresses his appreciation to Dr. R.C. Brown who supervised this work with the proper mixture of scourging and patience, and to Dr. T.K. Peucker who provided many very constructive comments on earlier drafts.

The author is also deeply indebted to his wife, Constance, and children, Elaine, Dominique, Maryse, Jean-François and Claude-Eric, who have literally been widow and orphans in New Brunswick during several semesters while the author was completing his studies at Simon Fraser University.

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INTRODUCTION

Geographers resent probing the future. This was clearly demonstrated at the 1975 annual convention of the Canadian Association of Geographers. As it turned out, the least attended session of this meeting of the profession was the special seminar on the "Geography of Future Environments". Even so, half of those present had come out of curiosity for the unusual, like passers-by who congregate at a fire site no matter how minor the occurrence is. And then, most of the issues raised seemed to lead into blind alleys. Is the future knowable? Can planners effectively make the future happen according to plans? Is research into the future a legitimate activity of geography?

As Ryan (1971, p. 510) puts it:

... geographers have largely turned their backs --sometimes in despair, often cynically-- on the think tanks and scenario-composing, the normative statements of alternatives, the guiding predictions and their canonic variations, that now fascinate the futurologists.

It is this writer's contention that most objections raised by geographers against studying the future as a valid geographical endeavor constitute semantic quagmires rather than seeds for relevant intellectual debate. Obviously

the future per se cannot be scientifically known since it does not historically (or objectively) exist. However, personal constructs or images of the future do exist and in fact are inseparable from decision-making. Thus it follows that the perception of imagined or non-existent future events largely determine what the future will look like in due time. It also follows that a genuine need exists to elicit images of the future so that they can be accounted for in a rational planning process.

That planners often cannot make the future happen according to plans is no evidence that future studies are sterile. In general, planners effectively control very few elements of their operational milieu. Indeed it can be easily argued that the number of causal factors which "explain" any given occurrence is truly unlimited. But does this necessarily mean that attempts to conjecture are trifling? On the contrary, cannot a case be made that the "art of conjecture" (Jouvenel, 1967) by extending their visions will help those geographers involved in planning to increase their effective powers on future events?

A common argument posits that any scientific venture, by definition, is a search for theories with which future events can be predicted. Therefore, to speak of a geography of future environments is tautological and un-

necessary. If geography is a science, then it is concerned with the future, and future environments is essentially what geography as a science is all about.

The basic flaw in this logic is to confuse prediction with what French scholars label prospective or "time prospecting". Whereas the purpose of prediction is to gain foreknowledge of how a situation will develop, the purpose of prospecting is much more ambitious and comprehensive in scope. It is an exercise in "laying open the collective unconscious" (Decouflé, 1972, p. 10). According to Berger (1964, pp. 270-275), its objective is fivefold: (1) to see far (in the long term rather than in the short term future); (2) to see wide (multidisciplinarity); (3) to analyse in depth (philosophically, psychoanalytically, etc.); (4) to take risks (boldness of hypotheses); and (5) to think about man (What do we want? What should we want?). Essentially forecasters are concerned with means while "prospectors" are concerned with ends and values (Boyer, 1961, p. 996).

Thoman, Conkling and Yeates (1968, p. 18) write:

...we geographers always have three realms to consider in assessing the location and functional interrelations of activity: (1) the realm of natural and cultural possibility, (2) the realm of economic feasibility, and (3) the realm of economic reality [see figure 1]. At present, none of these realms is static in size; changes in the size of each depend chiefly upon advances in man's technology and

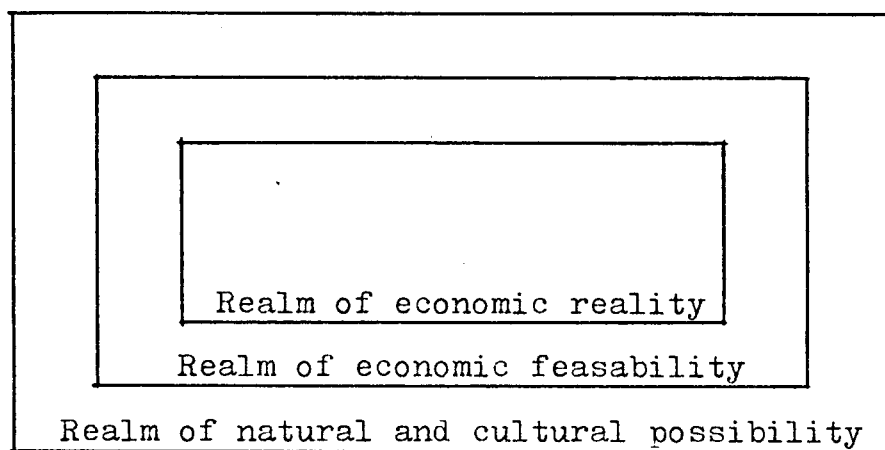
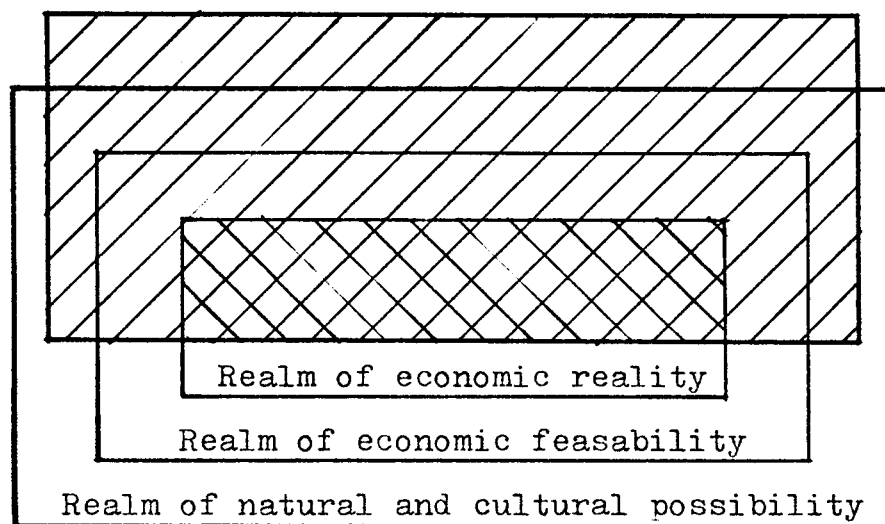
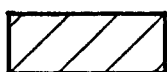


Figure 1.--Realms of locational and functional relationships in economic activity (After Thoman, Conkling and Yeates, 1968, p. 18)



Realm of desirable reality



Realm of desirable futures

Figure 2.--Realms of "desirable" activities in actual and potential situations

usually mean an expansion of all three realms. Theoretically, the only ultimate barrier to the expansion of each realm would be the actual size of the earth's surface. With increases in technological and economic efficiency, man could expand each realm until it filled the whole world. First, present restrictions to natural possibility would be removed, then those to economic feasibility, and finally those to actual location. However, ... such ideal conditions will not be realized in the immediate future. Indeed, they may never be realized.

The attitudes towards the future expressed in the above lines are typical of most geographic literature in North America today. The emphasis is most clearly on possible --in fact on technologically and economically possible-- futures, with some passing comments on probable futures, but seldom is there any attention paid to socially desirable and desired futures.

This paper rests on the conviction that, whatever the object of geography is claimed to be, geographers have a valid and distinctive contribution to make as "time prospectors". In particular, this contribution might focus on the much neglected realm of social desirability (see figure 2). The paper identifies some of the socially desired futures of the Maritimes and discusses the value of the Delphi approach as a geographical tool.

OBJECTIVES OF THE STUDY

The study was conducted in the winter of 1975 at Collège Saint-Louis-Maillet. The "experiment", which formed part of the instructional strategy for a seminar on the geography of the Maritimes, had three objectives:

1. A geographical objective: to explore the possibility of using the Delphi method as a mean for eliciting environmental perceptions of various study groups of people; in particular to gain insight into how college students and other subjects view the regional geography of the Maritime Provinces by obtaining their responses to "possible futures" stimuli.

2. An educational objective: to ascertain the merit of the Delphi method as a learning medium; in particular to help students increase their knowledge of a region and their awareness and understanding of the problems facing that region by "doing something" rather than by reading about the matter.

3. A "time prospecting" objective: to apprehend some of the possible, probable and desirable futures of the Maritime Provinces by achieving a "consensus forecast" of political, economic and cultural changes which may come

about in the region during this and the next generation.

Before discussing the methodology and results of the study, it is necessary to provide a proper conceptual framework by briefly reviewing relevant literature in the field of futures research.

LITERATURE REVIEW

Interest in the future is less pervasive than interest the the past. Nevertheless, Man's concern with his destiny and his efforts at divination are probably as old as the species and certainly predate writing. As a concept, the future is closely related to those of time and change. Recently, the traditional views of time as an incremental, linear, segmented and fixed dimension, taken for granted by our own civilization, has been challenged by scientists and philosophers. Einstein for instance theorized that time is relative to the speed of a mobile and contributed much to explode the assumed constancy of the dimension. Anthropologists, on the other hand, showed that ideas about time are deeply imbedded in culture and greatly differ from one civilization to another (e.g. Hall, 1959).

MODELS OF THE FUTURE

Models of the future which have emerged in the last twenty years and the sudden proliferation during the 1960's of studies deeply concerned with tomorrow similarly reflect profound cultural upheaval. The fear of the future is growing. Since the end of World War Two, Man

has developed the physical capacity to self-destruct. It is not a stroke of chance if much of the basic methodology used in social forecasting has grown out of "think tanks", organizations largely involved in military research and development. For instance, scenario-writing and concepts like the "balancing of terror" constitute offsprings of the RAND Corporation (see Dickson, 1971).

Not only is Man capable of voluntarily eradicating the species, but he may inadvertently do so as well through ecological imbalance. The flowering literature on futures is thronged with warnings about impending man-made crises: the time bomb of overpopulation (Ehrlich, 1968); imminent famine (Paddock and Paddock, 1967); the coming dark age (Vacca, 1973); and so on. Some writers (e.g. Eldridge, 1975) even talk about "megacrises" and a "crisis of crises".

The fear of the future also stems from the accelerative thrust of change. Hetman (1971) describes a state of "social weightlessness" associated with the "spell of change":

Up to now, the culture and politics of change have been totally ignored. The results are tragic: the majority of men, of all conditions, feel that they are diminished, uprooted, tossed about. Like sorcerer's apprentices or like ill-behaved children, they feel that they are being assailed by fantomatic monsters let loose by scientists, technicians, production organizers and the various categories

of public policy makers (p. 9, translation mine). The tremendous success of Future Shock, Toffler's (1970) "runaway bestseller", provides a measure of the epidemic dimensions of the social disease caused by "our collision with tomorrow".

On the other hand, the new attitude towards the future is meaningless when divorced from the secularization of Western societies. de Houghton, Page and Streatfeild (1971, p. 7) write:

... the weakening of religion (at least in its past forms), accompanied in the developed countries by an improvement in the material conditions of life and by new sociological and psychological knowledge, has diverted the individual's interest in himself from a post mortem to an in vivo future... Indeed, it seems that the time horizons of groups and individuals have been reversed. The former used to have comparatively near time horizons; they now feel they must look further ahead. The latter had very distant (that is post mortem) time horizons; most of them at least for all practical purposes, now set their horizons at the grave.

The realization that human beings are by and large the masters of their own fate, or --to use Flechtheim's (1966) phrase-- that the destiny of mankind must be looked upon as an "odyssey" rather than a "theodicy", has brought with it an intellectual climate ripe for the emergence of a new international fraternity of thinkers dedicated to a concerted investigation of the "sense of the future" (McHale, 1969).

The new movement variously labelled futures research, futurology, prospective, forecasting, futurism, etc. constitutes in fact a cover-all umbrella for thousands of practitioners recruited in all disciplines, countries and ideologies. During the last decade, the number of books and articles published by the group about the future has become inconceivably large. de Houghton, Page and Streatfeild (1971, p. 171) list twelve major journals specializing in forecasting in almost as many countries. English speaking futurists maintain contact through Futures, Technological Forecasting and Social Change and The Futurist.

Despite the diversity of approaches and backgrounds, current ideas on the future focus on a limited number of interrelated themes. These will now be traced to their originators.

The future as an object of scientific enquiry

The term futurology was coined in the mid 1940's by Flechtheim (see Flechtheim, 1966). However, "the founding father of modern futurism" (Toffler, 1972, p. 264) did not consider futurology as a science in the strict sense, Arguing that any knowledge acquired through rigourous methods and subject to continual verification is, in the broad sense,

scientific, Flechtheim (1966, p. 72) claimed that " . . . Futurology may pass as a science not so different . . . from the social sciences (for instance, history or political sciences)". If the argument seems shaky, the motivation was nevertheless noble, for Flechtheim's primary goal was to make the study of the future a respectable academic discipline which ought to be taught in universities.

A decade later, Helmer and Rescher (1959) carried this epistemological debate onto different grounds. They argued, perhaps more convincingly, that the difference between the so-called exact sciences and inexact sciences like futurology is a difference in degree rather than one in principle, that is, one which involves a more substantial use of expert judgment in order to complement deficient theories:

Epistemologically speaking, the use of an expert to account for background information too vast to be properly articulated in formulas . . . amounts to considering the expert's predictive pronouncement as an integral, intrinsic part of the subject matter, and treating his reliability as a part of the theory about the subject matter. (Helmer and Rescher, 1959, p. 43)

To be sure, skepticism about the validity of the scientific pretensions of futures research survives. Europeans in particular, following Jouvanel, generally reject the term "futures research" which tends to "make others believe

that there is a 'science of the future' able to set forth with assurance what will be" (Jouvenel, 1967, p. 17).

However, there can be no doubt about the seriousness of social forecasting if one briefly considers the scientific prestige of academics involved in investigations such as those carried by the Commission on the Year 2000 (see Bell, 1968).

The prospective attitude

The term prospective was introduced in 1957 by the French philosopher Berger (see Cournand and Lévy, 1973). Reflecting on the Western conception of time, Berger came to the conclusion that most decisions are justified through one of three basic thought processes: the precedent, the analogy and extrapolation. Precedents produce security but kill initiative. Analogies alter details but perpetuate basic models. Extrapolations enjoy scientific rigour but assume constancy. All three processes display a reliance on repetitiveness and the "same laziness". Intellectual dependence on precedents, analogies and extrapolations stems from "retrospective attitudes".

Berger observed that retrospective, i.e. piecemeal and short-term anticipation of the future becomes increasing-

ly inadequate as the pace of change is accelerating. Instead, the future must now be faced squarely and a new "prospective" outlook, i. e. a comprehensive and long-term approach of the future must be developed:

Our civilization can be compared to an automobile which is travelling faster and faster on a strange road by night. Its headlights must beam further and further if a catastrophe is to be avoided. Hence, prospective is essentially the study of the distant future (Berger, 1964, p. 271. Translation mine).

The future as futuribles

A most elegant and useful conception of the future is the fan model proposed by Jouvenel (1967).¹ For Jouvenel, the nature of the future can best be understood through a comparison with the nature of the past. The past is unique. It is comprised of historical facts (or facta) which are certain, objective, knowable, unchangeable and largely irrelevant for action. On the other hand, the future is multiple. It consists of an array of possible "events" (or futura) fanning from the present state of affairs. Futura are imaginable, uncertain, subjective, unverifiable, interchangeable and yet essential to decision-making. It is impossible to "predict" what will happen. One can only "foresee" what may

¹The fan model explains why most futurists prefer the awkward phrase "futures studies" to the singular form "future studies".

happen. Among futura, some cannot possibly result from the present state of affairs. However, a futurum which can be causally related to the present by an act of intellectual "pro-ference" becomes a plausible or feasible futurum or "futurible". The use of facta is necessary to generate and evaluate futura. Forecasting thus amounts to: (1) imagining futura, (2) identifying futuribles and (3) distributing probabilities among futuribles.

The future as a collective creation

That the future will result from what people will do is perhaps a truism. The implications of the proposition, however, are far from being negligible. For one thing, what people do is determined in no small part by what they think. In a masterful work, the Dutch thinker Polak (1961) theorized that historical development is guided by the implicit future models prevailing at a given time. Setting out to discover the "images of the future" which contributed to mold Western history, he found numerous concepts bearing considerably on the shaping of the future in all the major fields of thought. A few examples are the "Providence of God", the principle of scientific certainty, the view of history as self-repeating cycles, the paradigm of a nomothetic, orderly, determined world, and so on. Such images are similarly related to at-

titudes ranging from the boundless optimism of judeo-christian believers to the "futureless" pessimism of existentialists.

In a follow-up book, Polak (1971) suggested that most current future models constitute "dogmatics of the future" precluding free and willful action. "Thinking about the future as a rule includes something definite, but it is inclined to exclude all the rest and anything that differs from it" (p. 42 Polak's italics). Dogmatics must make way to new explicit visions of the future (or "prognostics"), which imply democratically defined long term goals based on human aspirations.

Paradoxically, what sets apart traditional utopians from modern futurists such as Polak is the latter's concern with the present. Futures proposed by utopians represent attempts to break with the present. On the other hand, contemporary time prospecting is in fact an in depth examination of the present state of affairs. To use Berger's metaphor again, it is an attempt to steer the automobile, i. e. the present, clear of obstacles and precipices and onto another more rewarding route. This process of "inventing the future" has perhaps been best described by Gabor (1964, pp. 207-208) in one of the field's most in-

fluent books:

The first step of the technological or social inventor is to visualize by an act of imagination a thing or a state of things which does not yet exist and which to him appears in some way desirable. He can then start rationally arguing backwards from the invention and forward from the means at his disposal until a way is found from one to the other. There is no invention if the goal is not attainable by known means . . .

The highest hurdle in the race towards a socially invented tomorrow remains the problem of identifying which futuribles are desirable and desired. Many authors have dwelt on the matter. Jouvenel (1967, p. 277) proposed the creation of a "surmising forum" where "opinions about what may be and about what can be done will be put forward . . . for the purpose of discussing the future continuously". Jantsch (1972, pp. 229-230) advocated a new purpose and structure of the university. His inter- and trans-disciplinary university is a "political institution" which

would become society's centre for investigating the boundaries and elements of the recognised as well as the emerging 'joint systems' of society and technology, and for working out alternative propositions for planning aimed at the healthy and dynamically stable design of such systems.

But the boldest suggestion is undoubtedly Feinberg's (1968) "Prometheus Project". It involves "a cooperative effort by humanity to choose its long-term goals" (p. 181). The blueprint calls for an intensive world-wide publicity

campaign followed by a thorough collection of suggestions. A coordinating agency would redisseminate the proposed goals for discussion until something approaching a universal consensus emerged, hopefully in less than half a century.

Surprise-free and surprise-full futures

The heel of Achilles of futures research clearly rests with the difficulty of adequately and democratically defining long-term goals. Still, should the future ultimately proved to be impossible to shape closer to society's desire, forecasting would, if nothing else, serve the crucial purpose of reducing "the number of surprises in store for us" (Helmer, Brown and Gordon, 1966, p. 94). Flechtheim (1966, p. 79) writes:

As the weather forecast helps people to protect themselves against storms and floods, so futurological predictions might enable some to escape the social tempests, cultural deluges, and historical catastrophes. And if this lucky minority were to preserve not only their lives, but also some of the best social achievements and cultural values of the past, Futurology would have rendered some service to the future.

At the Hudson Institute, the art of prospecting for futures surprises has come of age (v. g. Kahn and Wiener, 1967). For Kahn and his associates, probable and plausible futures must not be overemphasized at the ex-

pense of the improbable and unreal, for it would indeed be surprising if the future did not yield any surprise. The best preparation therefore consists in "thinking about the unthinkable" (Kahn, 1962). "Surprise free projections" based on current trends must be supplemented by "canonical variations of the standard world", that is scenarios describing what might happen if what is now anticipated did not come about as expected. The Year 2000 (Kahn and Wiener, 1967) essentially represents a collection of such scenarios about future worlds in various states of disorder.

THE DELPHI TECHNIQUE

Techniques for addressing the future imply by definition a mix of reason and intuition. Unfortunately, the more systematic methods, like trend extrapolation and systems analysis are "retrospective" in nature and therefore of limited value for long-term forecasting. At the other end of the spectrum, scenarios and science fiction worlds are generally not meant to be set in a definite time-frame and assessed in probabilistic terms.¹

The Delphi technique represents an attempt to uti-

¹For a comprehensive examination of forecasting techniques see Jantsch (1967). For a primer see Gordon (1971).

lize intuitive thinking within a rigorous framework. It has long been common practice of government agencies, corporations, etc. to rely on the judgment of experts even in matters where no adequate theory is available. However, little attention has been paid to ascertaining and improving the reliability of expert opinion. In an early experiment, Kaplan, Skogstad and Girshick (1950) explored how experts could best be utilized for predicting social and technological events. Predictors were divided in three groups: in a first group, individuals were asked to produce predictions independently; in a second group, individuals were asked to produce predictions independently, but following a group discussion; in the third group, the participants developed their predictions by working together towards a consensus. A major conclusion of the study was that predictions made by groups are more likely to be right than predictions made by individuals working alone. In particular, the number of "blunders", i.e. extreme errors in prediction, was found to be reduced by group discussion of the issues involved.

Based on this kind of information, Helmer and Dalkey developed a method for achieving consensus among experts which has come to be known as the Delphi technique (see Dalkey and Helmer, 1963; Helmer, 1963 and 1967; Dalkey, 1969; etc.). In its original form, a panel of experts is asked to

explore the probable outcome of a given situation. However, the technique differs from regular committee work in that the participants remain unknown to each other throughout the exercise. Instead of a face-to-face confrontation of opinions, feedback from the group to individual members of the panel is controlled in order to eliminate some of the undesirable effects of sociopsychological factors such as the influence of specious argumentation and the domination of the group by the more articulate, prestigious or hard-spoken participants. Typically, this is done by asking the participating experts to answer a written questionnaire. Individual responses are then collated by the researchers who act as intermediaries. The collective or aggregate judgment is then circulated to the participants in a second round which is designed to elicit reactions and possible changes of opinions. Normally the spread of responses narrows considerably from the first to the second questionnaire and the process can be repeated until the desired consensus level is achieved. Theoretically, when the reasons for extreme opinions are properly fed back to the group, the median can be interpreted as the best descriptor of the group opinion (Gordon and Helmer, 1964, pp. 60 - 61). When no consensus is achieved, the researchers still gain valuable insight into the conflicting positions.

A number of assumptions underlie the Delphi technique. One is that an expert can be defined as a person who makes reliable judgments in his field. Another, which has been emphasized by Dalkey (e.g. 1969), is the common sense notion that "two heads are better than one". A third is that when experts agree about the likely outcome of events, this tend to make the outcome happen as predicted because of the influence exerted by the experts in their field.

At the RAND Corporation where the technique was originally developed in the 1950's, Delphi was first used as a tool in military policy planning and operations research (Dalkey and Helmer, 1963). Its first application in a major long-range forecasting study was reported in 1964 (Gordon and Helmer). Eighty-two experts divided among six different panels were polled on the subjects of scientific breakthroughs, population growth, innovations in automation, progress in space, probability of war and future weapon systems. Based on the more significant items of the resulting forecasts, the authors outlined a view of the worlds of 1984 and 2000 as seen by the participants. A description of some conceivable features of the world in the year 2100 was also ventured. Ament (1970) reviewed the near-term forecasts of the study after five years had passed. He found that, in 1969, out of the forty-seven events judged by at least a

quarter of the participants to have a fifty percent probability of occurrence by 1975, eighteen had already occurred and eleven had partly occurred. In other words, about one third of the "predictions" had not yet materialized with still more than five years to go.

During the past decade, several hundreds studies using the basic Delphi approach have been conducted covering a wide variety of subjects. For instance, Hudson (1974) lists twenty-seven doctoral dissertations completed in American universities which used the methodology, mostly in the fields of education, public and business administration and technology. Geographers, however, seem to be largely unaware of the method.¹

Many of the Delphi studies conducted by RAND and the Institute for the Future--although producing interesting technological and societal forecasts and other substantive results--purposely paid close attention to improving the method (see for instance Dalkey et al., 1972; Helmer, Brown and Gordon, 1966; and Brigard and Helmer, 1970). In particular,

¹Among early adopters of Delphi in geography, Mitchell (1971) signalled the value of the technique for planning and teaching but not in a long-range futures research context. At the time of this writing, a collection of essays which includes some Delphi work by geographers is just being released out of press (Abler et al., 1975). This writer has been unable to review the book.

Dalkey and his associates sought to ascertain the value of anonymity, multiple iteration and controlled feedback. In an extensive series of experiments, university students were asked to produce short-term predictions and estimate answers to "almanac questions" such as "How many telephones were in use in Africa in 1967?"

Dalkey reports:

The general outcome of the experiments can be summarized roughly as follows: (1) on the initial round, a wide spread of individual answers typically ensued; (2) with iteration and feedback, the distribution of individual responses progressively narrowed (convergence); and (3) more often than not, the group response (defined as the median of the final individual responses) became more accurate. This last result, of course, is the most significant. Convergence could be less than desirable if it involved movement away from the correct answer (Dalkey et al., 1972, p. 22).

Concerning the alleged superiority of anonymous interaction, Dalkey concludes that "the overall weight of the experiments tends to confirm the hypothesis that, more often than not, discussion leads to a degradation of group estimates" (idem, p. 24).

Methods for improving the selection and performance of experts have also been tested by Helmer and others. A promising avenue seems to be the use of self-appraised ratings of competence. For example, participants are asked

to state the degree of confidence they have in each of their predictions. This allows weighting the responses. Alternatively a subgroup of "elite opinions" can be selected and other answers discarded. Brown and Helmer (Appendix II in Helmer, Brown and Gordon, 1966) claim that elite medians constitute considerably better estimations than medians of the full arrays of responses.¹

¹An interesting offshoot of the Delphi technique is the "Delphi conference", i.e. a Delphi exercise where the participants interact through a computer from remote terminals. "The Delphi conference makes it possible for a government agency or a business concern to confer rapidly with widely scattered persons in the event of an emergency situation. Each individual could feed his views into the computer whenever time and circumstances permitted and the decision-maker would have benefit of all counsel that his experts had offered whenever he consulted the computer"(Turoff, 1971, p. 57). The Delphi technique and the Delphi conference must not be confused with DELPHI, a computer software system developed by Osgood and Umpleby (see Appendix in Jungk and Galtung, 1969). DELPHI involves the use of a special automated teaching machine with which the user interacts in order to learn about the possible influence of his or her decisions on the likely outcome of some future chain of events.

METHODOLOGY

RESEARCH PROCEDURE

For the purpose of the study, nineteen college students together with nineteen other community members were enrolled in a Delphi-style experiment designed to identify and evaluate the desirability of socio-economic changes which might come about in the Maritime Provinces during the next few decades. The research programme was divided into five phases: a briefing phase, a brainstorming phase, a probability assessment phase, a consensus-seeking phase and a project evaluation phase. Only fifteen students --all registered in the Maritime geography seminar--participated in all phases of the experiment. They will be referred to as the seminar participants. The remaining four students and the community members were volunteers who entered the experiment at the beginning of the third phase. They will be referred to as the guest participants.

In this section the research procedure is outlined and some consideration is given to the representativeness of the study sample.

Briefing

In the first phase, the seminar participants were briefly exposed to the spectrum and current methods of futures studies. The prospects and relevance of time prospecting were discussed. The Delphi technique was explained. Finally, a rehearsal was staged. The group was invited to volunteer some examples of economic, social and political changes not directly related to the future of the Maritimes. Then the group tried to arrive at a consensus of opinions about the examples by means of a series of secret ballots.

"Brainstorming"¹

Once everyone was satisfied that the basic methodology was properly internalized, the seminar participants were given three weeks to come up with a list of written statements concerning changes which they felt would come about in the Maritimes during the next fifty years.

The following guidelines were provided:

1. As "experts" participating in a Delphi experiment, the students were asked to work independently. In view of the educational objective of the study, however, they were encouraged to consult as many diverse sources as they

¹Brainstorming can be defined as intense cooperative thinking by a group towards the promotion of a large quantity of ideas or the identification of all possible aspects of a particular question. Congruent with the Delphi method, however, the brainstorming phase described here did not involve face-to-face contact of the group.

could during the period allocated in order to develop a broad awareness of Maritime issues.

2. Each proposed statement should comprise a single specific change rather than a complex "motherhood" type of change (e.g. hospital services will improve).
3. Changes were to be specific to the Maritimes or a particular region thereof and internal in origin as far as possible.
4. Changes involving major political decisions were to be preferred.
5. Positive wording of statements was invited.
6. "If" and other conditional statements were to be avoided.

Over eight hundred statements were turned in on deadline. To make sense out of this plethora, a geographical, and then a thematic classification were devised. Duplicates were weeded out, and the obviously unusable discarded. These ranged from the pure "prophecies" of disasters involving natural hazards and chance events, to changes closely keyed to uncontrollable international conditions. Statements of changes judged to be of minor importance or irrelevant to the study and phantasies deemed to be downright impossible because of situations apparently unknown to the predictor were also rejected. In final analysis, 123 statements were retained. After minor editing and numbering, these yielded the basic raw material for the questionnaires used in subsequent phases (see Appendices I and II).

Probability assessment

In this phase, the seminar participants were presented with a file containing three documents: an instruction sheet (see Appendix III), a listing of the 123 statements of changes (see Appendix I) and a response form (see Appendix IV) . The instruction sheet explained the task to be performed by the respondents. Essentially, it consisted in rating each statement on three distinct five point scales on the response form. The first scale addressed the probability of occurrence of the stated change as perceived by the respondent. The second dealt with the perceived probable dates when the stated change would occur (if it did). The third tried to measure what the respondents thought the attitude of the people primarily concerned by the stated change would be if the change did occur. A blank space was also left on the form which the respondents could use to make comments.

The answer session lasted one and one half hours. It took the participants slightly over one hour on the average to work through the full questionnaire.

To enlarge the study sample and provide a comparison group, the seminar participants were asked at this stage to contact one or two persons in the community--preferably not close relatives--who could be considered to be

knowledgeable on Maritime affairs and who would be willing to go through the experiment as "guest experts". Twenty-three "volunteers" eventually joined the study group. A sample of thirty-eight questionnaires was thus completed, thirty-seven of which were usable.

Responses of this first questionnaire were then collated. Only the mode (or most frequent answer) of each scale was compiled at this stage so that the first round results could be promptly fed back to the "experts".

Reassessment and consensus-seeking

In this phase of the study, respondents were supplied with a new instruction sheet (see Appendix V), the list of statements, their previously completed response form, and a new response form on which the "collective opinion" (i.e. computed modes) appeared (see Appendix VI). Instructions explained that respondents were expected to indicate whether or not they could reconcile with the expressed collective judgments by checking for each of the 123 stated changes one of the two following statements: "I generally agree with the majority" and "I strongly disagree with the majority". In cases where they "strongly disagreed", respondents were asked to check on the appropriate scale (s) where their response (s) now stood. The instruction sheet

noted that it was perfectly normal for responses in this new round to be somewhat inconsistent with those given during the previous round.

Finally, a fourth five-point scale dealing with the desirability of the stated change "from a personal point of view" was to be completed.

Eventually, thirty questionnaires out of the potential thirty-eight were duly completed, received and compiled. This represents a 79% perseverance rate for those who participated in the study, a very satisfactory proportion in view of the timing and amount of work requested from the respondents.¹

Project evaluation

It had originally been planned to follow-up the Delphi experiment with group discussions of the results and a final evaluation exercise in the form of a formal "introspection workshop". Time constraints regrettably prevented the projected meeting. However, private conversations

¹ Attempts to reach the eight persons who failed to return the final questionnaire yielded the following results: two refused to continue alleging lack of time; one admitted procrastination but further promises did not materialize; one was vacationing in Europe; one was moved to another region; one questionnaire was apparently completed but lost; and two other participants proved impossible to contact.

with respondents produced much valuable feedback on the values and limitations of the study.

SURVEYED POPULATION

The very design of this study precluded from the outset a rigorous definition of a study population and consequently, no energies were expended to insure a representative sample of participants of any sort. However, the geographical and futures research objectives of the study necessitate that some considerations be given to the representativity of the participants so that the value of the results can be properly assessed.

The technique used in the research, although inspired by the Delphi method, differed from the original in at least two significant respects. First, the seminar participants acted both as respondents and as research assistants. This meant a partial relaxation of the characteristic Delphi anonymity. Inasmuch as guest participants remained unknown to each other and individual responses were kept secret at all times, this type of interaction should not produce significant shifting of the results.¹

¹The Institute for the Future has experimented with face-to-face "mini-Delphi" sessions where participants write down their opinions. Results are said to be consistent with those obtained with the more elaborate method. (Gordon, 1971)

A second divergence with the original Delphi approach is the fact that the participants in the study cannot be deemed to be experts in the usual sense of the term. A satisfactory definition of what an "expert on Maritime affairs" really is or should be is virtually impossible to achieve. The number of issues involved precludes genuine expertness on all counts. At best, the participants of the study can be referred to as enlightened citizens.

A priori, the projected sample included a captive group of fifteen geography students and an undetermined number of volunteers from the community at large. A posteriori, the composition of the actual sample can be analyzed in terms of socio-economic characteristics and then related to a larger population sharing the same characteristics. Thus, a striking feature of the sample is its peculiar occupational structure. Besides the seminar participants representing a rather homogeneous group of social science students, the twenty-three guest participants occupationally broke down as follows: six college professors, from six different departments and three different faculties; three college executives, each on a different level of the hierarchy; three small business operators; three high school teachers; two community development agents; one private secretary; and, one newspaper reporter. The remaining four were also social science students, and three had some training in geography.

If for practical purposes these four students are assimilated to the seminar participants, two comparable subgroups of nineteen participants emerge: the students and the non-students.¹

It can be readily appreciated that the total sample was heavily loaded in favor of the academics in general and the college community in particular. In fact, all but the three businessmen had some degree of university education and more than half of the non-student group worked on campus.

All the participants in the survey also worked and lived in "a distinct cultural area in French Canada" (Bérubé, 1970)--and for that matter a distinct cultural area in the Maritimes--which is widely known as the "Republic of Madawaska" (see also Cameron, 1974).

The above considerations suggest that the study sample is probably representative of a larger "Republican" elite. Therefore, if "elite theory" is correct in assuming that "elites influence masses more than masses influence elites" (Dye and Zeigler, 1971), then "collective opinions" elicited by this study may indeed foreshadow "conventional

¹At the conclusion of the experiment, both the students and non-students subgroups had shrunk to fifteen members.

wisdom" of tomorrow in the "Republic".¹

¹The age and sex imbalances of the total study sample invite further comments. In terms of age, all age categories between the ages of legal majority and normal retirement--and only them--were represented in the sample, the low twenties being over-represented due to the importance of the student subgroup. In terms of sex, only ten respondents (26%), seven students and three non-students, were female. According to Toffler (1972, pp. 7-8), Americans are planning, without being aware of it, a white, male and middle-age future. In this respect, the "Republican elites" would not be much different.

RESULTS

In this section, the future of the Maritime Provinces as perceived by the study group is briefly examined. Consideration is given first to the collective image produced by aggregating the individual responses of all participants in the study. A short analysis of how the perception of the two subgroups differ then follows. Finally, the substantive content of the anticipated changes is examined.

THE COLLECTIVE IMAGE

Appendix VII displays in tabular form absolute frequencies of responses obtained for each response category and each previsional statement. The consensus column indicates the number of respondents who checked column X on the final response sheet thereby showing their general agreement with the modal answers compiled from the first general round. Results for the probability, date and acceptance scales are those of the first round (37 respondents). The desirability scale was completed only once during the final round (30 respondents).

To make sense out of these crude data, a number of statistical manipulations can be effected, like computing

measures of central tendencies and dispersion. Most Delphi experimenters have generally compiled medians and upper and lower quartiles. Discussions of the results dwelt on the relative shift and convergence of these measures upon successive iterations.

No matter what statistical procedures are adopted, it can be readily appreciated that the data set collected in the course of this experiment represents a vast amount of information much of which is of limited value for the purpose of the study. In order to extract only the more significant elements of the aggregate forecast, two related strategies are adopted. First, an attempt is made to derive the most relevant "predictions" by identifying those statements whose statistical features are congruent with theoretical models or assumptions about how the future comes about. Second, an ad hoc comprehensive index is developed with the view of ordering the 123 statements in some meaningful way.

Future models

Future models were briefly discussed in the literature review. Following Jouvenel, Helmer, Gabor and others, most western students of futures would agree today on the following propositions. There is no single tomorrow; the future is comprised of an array of possible alternatives,

some probable, some desirable. The future cannot be known since it does not exist. In fact "forecasting would be an absurd enterprise were it not inevitable" (Jouvenel, 1967, p. 272). The future constitutes a collective creation; it consists not of what will happen but of what people will do. Therefore knowledge of the goals of individuals and of the consensus shared by individuals on social values reduces uncertainty about societal future.

Based on these propositions, a probable change can be defined as one which exhibits one or more of the following characteristics:

1. it is generally viewed as highly probable;
2. it is generally expected to be realized in a near future rather than in a distant future;
3. a consensus is shared on its desirability;
4. no foreseen condition would make it impossible or unlikely.

Conversely, changes which exhibit the reverse characteristics can be construed as unlikely.

The collective perception of the future of the Maritimes will now be examined under the following five headings: (1) consensus level; (2) probability; (3) dates; (4) acceptance; and (5) desirability.

Consensus level

The consensi obtained during the reassessment phase can be analyzed in reference to some meaningful thresholds. A working assumption can be made that the most "future-worthy" statements are those which brought forth from the participants either an unusually large or else an unusually low consensus of opinions. Seven consensus levels were thus arbitrarily defined. Table I displays the vocabulary and quantitative conventions used as well as the number of statements falling on each consensus level.

TABLE I
CATEGORIZATION OF CONSENSUS

| Levels of Consensus (#) (appellation) | Agreement of Participants | | Distribution of Statements | |
|--|------------------------------|-------|-------------------------------|-----|
| | (N=30) | (%) | (N=123) | (%) |
| 1 unanimity | 30 | 100 | 3 | 3 |
| 2 high consensus | 27-29 | 90-99 | 35 | 29 |
| 3 moderate consensus | 24-26 | 80-89 | 41 | 33 |
| 4 low consensus | 21-23 | 70-79 | 34 | 28 |
| 5 moderate dissension | 18-20 | 60-69 | 8 | 7 |
| 6 high dissension | 15-17 | 50-59 | 2 | 2 |
| 7 controversy | 15 | 50 | 0 | 0 |

It is remarkable indeed that after a simple reassessment round a consensus level above 70% was reached for over ninety percent of the statements and close to two thirds fell

above the 80% mark. In fact no statement scored less than 56% on the consensus scale.¹

Assuming--conservatively-- that a consensus level of 90% and up is a high consensus and a valid criterion for selecting the trustworthy anticipations, then thirty-eight or about thirty percent of the statements can be construed as having elicited very reliable predictions (table II).²

TABLE II
LIST OF STATEMENTS WHICH ELICITED A
CONSENSUS LEVEL OF 90% OR BETTER

| | | | | |
|-----|-----|-----|------|------|
| 17. | 37. | 63. | 86. | 108. |
| 18. | 39. | 64. | 89. | 110. |
| 20. | 43. | 72. | 91. | 117. |
| 22. | 45. | 73. | 92. | 121. |
| 26. | 47. | 77. | 99. | 122. |
| 27. | 48. | 78. | 101. | |
| 34. | 51. | 79. | 102. | |
| 35. | 53. | 83. | 106. | |

¹If the null hypothesis that "a 50% consensus level is not a significant majority" is tested by the Chi-squared method, then, for a sample size of 30, an 80% consensus level is significant at the 99.9% probability level, and a 70% consensus is significant at the 95% probability level. A consensus level below 65% is probably not significant.

²Statements are referred to by the working numbers used throughout the experiment as they appear on the "list of provisional statements" (see Appendices I and II).

A discussion of the prognosis developed for each of these statements is unnecessary at this stage in the paper. However, it is interesting to look immediately at the three statements for which unanimity was reached. The prognosis is in parentheses.

- 48. Exploitation of a variety of marine plants will form the basis of an important coastal industry.
(71-90% probability; 1991-2000; population highly in favor)
- 64. Construction of hydro-electric power dams will be banned in New Brunswick.
(11-30% probability; not during the next 50 years; population undecided, apathetic or divided)
- 122. A CBC transmitter located West of Grand Falls will make the French national network present in the whole of Marévie.
(71-90% probability; 1981-1990; population highly in favor)

At the other end of the consensus spectrum, the predictions made about statements which disclosed a wide variety of opinions can be treated as unreliable. Hence a consensus level below 60% is assumed to reveal a definite uncertainty about the stated change. No statement appears in the "controversy" category but the following two stand on the "high dissension" level:

- 9. The North-West region of New Brunswick will become a part of Quebec.

(71-90% probability; 1991-2000; population undecided, apathetic or divided)

87. St. John will become the largest city of the Atlantic Region.

(71-90% probability; not during the next fifty years; population undecided, apathetic or divided)¹

Probability

The probability scale was designed to determine whether the stated changes were perceived as highly probable (91-100% of chances of occurring), probable (71-90% of chances), unpredictable (31-70% of chances), improbable (11-30% of chances) or highly improbable (10% of chances).

It can be safely hypothesized that when a change is perceived to be "probable" by the absolute majority of the respondents (median) and "highly probable" by a simple majority (mode), and is given better than 80% of chances of occurring by the average respondent, then this change will very likely occur. Five statements exhibit these characteristics:

21. South-East New Brunswick will have been progressively anglicized and only Madawaska, Restigouche and Gloucester counties will still number a majority of francophones.

¹It must be restated at this point that the measure of consensus obtained is derived from the group reaction to the modal answers fed back from the previous round. Normally the full array of answers or at least a measure of dispersion should be fed back to the participants. By discriminating against the non modal answers during the final round, this short cutting of the regular Delphi procedure is to some extent methodologically debatable. The following discussion of the probability, date and acceptance scales is based solely on the results of the original round.

- 73. The "Renous" route linking Grand Falls and Newcastle will be completely paved.
- 94. Attending kindergarten will be compulsory for every child from the age of four.
- 102. A ministry of sports and leisure will be created
- 119. The St. Leonard regional airport will be a reality.

Similarly, when a change is perceived to be "improbable" by the absolute majority of the respondents and "highly improbable" by a simple majority, and is given less than 20% of chances of occurring by the average respondent, then it can be expected that the change is very unlikely to occur. The following three constitute such statements:

- 2. Charlottetown will become the capital of the Maritime Union.
- 6. Magdalen Islands will become part of one of the Maritime provinces.
- 13. Van Horne will make a come back on the New Brunswick political scene.

Dates

The date scale was designed to determine when the participants believed that the changes would occur. It can be interpreted as a bipolar scale discriminating between near and distant futures. Changes perceived as likely to happen before 1985 using the average predicted date are the following:

- 53. Maritime researchers will find a solution to the damaging of spruce trees by bud worms.

- 60. Bricklin will definitively shut up shop in New Brunswick.
- 73. The "Renous" route linking Grand Falls and Newcastle will be completely paved.
- 99. There will be a French law school in New Brunswick.
- 102. A ministry of sports and leisure will be created.

Similarly, two changes were perceived as "unlikely to happen ever or at the least not before fifty years from now":

- 2. Charlottetown will become the capital of the Maritime Union.
- 6. Magdalen Islands will become part of one of the Maritime provinces.

Acceptance

The acceptance scale asked the respondents to indicate whether or not the occurrence of the stated change would be favorably received by the population involved and to what degree. The rationale behind this question is that either a genuine "guesstimate" of the "true answer" will be offered or else respondents will project their own attitudes towards the stated change. A case can be made that the two response subsets would tend to be identical. This is of course verified when the consensus level is high.

Following is a list of changes of which people are expected to be "highly in favor" by more than half of the respondents and "generally in favour" by most of the other participants.

- 53. Maritime researchers will find a solution to the damaging of spruce trees by bud worms.
- 69. The Trans-Canada highway will become a divided highway along its full New Brunswick route.
- 70. The "Acadian Trail" between St. Leonard and Campbellton will be completely rebuilt in accordance with high speed highway standards (60 mph).
- 71. A "corridor highway" linking St. John to the Windsor-Lévis axis via the State of Maine will be built.
- 83. The whole territory of New Brunswick will be covered by a French television network.
- 119. The St. Leonard regional airport will be a reality.

On the contrary, people would be "highly opposed" to the following changes according to more than half of the respondents and "generally opposed" according to most of the others.

- 24. A significant increased of criminality and violence will be recorded in the Maritimes
- 26. Unemployment rate in New Brunswick will double its present level.
- 29. New Brunswick will face a critical shortage of physicians.

Desirability

As a final task, respondents were asked at the end of the terminal round to indicate on a five point bi-polar scale how desirable they personally felt the stated changes to be. Responses on this scale tended to be closely clustered, a confirmation of the consensus shared on most items at the conclusion of the exercise. When the magnitude of individual ans-

wers is disregarded and only their direction considered, it is found that a 90% consensus level was reached for sixty-four out of the 123 statements. Table III lists the fifty-five desirable and nine undesirable changes thus uncovered.

TABLE III
LIST OF DESIRABLE AND UNDESIRABLE CHANGES (90% CONSENSUS)

| Desirable Changes | | | | | Undesirable Changes |
|-------------------|-----|-----|------|------|---------------------|
| 10. | 37. | 68. | 82. | 106. | 4. |
| 11. | 41. | 69. | 83. | 107. | 16. |
| 15. | 42. | 70. | 86. | 108. | 24. |
| 22. | 46. | 73. | 93. | 112. | 26. |
| 23. | 47. | 75. | 96. | 114. | 29. |
| 25. | 48. | 76. | 98. | 115. | 38. |
| 28. | 51. | 77. | 99. | 117. | 49. |
| 32. | 53. | 78. | 101. | 118. | 67. |
| 33. | 56. | 79. | 102. | 119. | 116. |
| 34. | 58. | 80. | 104. | 121. | |
| 36. | 63. | 81. | 105. | 122. | |

Following is a list of changes which would presumably be most welcome by virtually the whole sample; these were all perceived as "highly desirable" by at least half of the respondents, as "desirable" by most of the others, and no one saw them as either "undesirable" or "highly undesirable".

- 22. A massive return of Maritimers living outside their native province will be witnessed.
- 46. The economic importance of fishing in New Brunswick will considerably rise and then stabilize.

48. Exploitation of a variety of marine plants will form the basis of an important coastal industry.
51. Numerous small factories producing small wooden items will appear in small communities.
53. Maritime researchers will find a solution to the damaging of spruce trees by bud worms.
63. The project of a tidal power plant in the Bay of Fundy will become a reality.
68. Prince Edward Island will be linked by highway to New Brunswick.
69. The Trans-Canada highway will become a divided highway along its full New Brunswick route.
70. The "Acadian Trail" between St. Leonard and Campbellton will be completely rebuilt in accordance with high speed highway standards (60 mph).
77. Daily flights will exist between every city of the Maritimes.
79. A heavy gauge railway will be built between Edmundston and Rivière-du-Loup.
83. The whole territory of New Brunswick will be covered by a French television network.
96. University education will be tuition free for all Maritime residents.
99. There will be a French law school in New Brunswick.
101. An ocean study centre will be developed in New Brunswick (possibly at Collège de Bathurst).
102. A ministry of sports and leisure will be created.
112. A second French daily will be published which will survive in New Brunswick.
115. Enrolment of full time students at Collège Saint-Louis-Maillet will break the 600 mark.
117. A deep sea port will be built at Gros Cacouna which will benefit the Marevian economy.

Conversely, none of the 123 changes appear to be similarly unwelcome. It is tempting to ask why? Going back to the probability, date and acceptance scales, the same imbalance in favor of the positive side of each scale can in fact be noticed. The explanation of this negative skewness of the observed distributions undoubtedly lies in the filtering effect of the brainstorming phase of the experiment and confirms some of the basic assumptions of future models. If indeed future events materialize the present collective desires (whether these are properly articulated or still unconscious), then personal constructs of the future must tend to be optimistic and reflect respondents' ambitions. The list of statements generated during the brainstorming phase already constitute a collective forecast and therefore, congruent with future models, it is comprised of items which are seen as desirable by at least someone in the group.¹

¹Pushing this line of argument one step further, a case can be made that prophets of doom often prove to be wrong simply because the object of their predictions is precisely that: doom. By definition, unhappy endings are undesired endings against which people will react when forewarned. Excluding natural hazards, real doom can only be the result of unforeseen disasters caused by unperceived conflicts.

Comprehensive Index

In the preceeding pages, an attempt was made to identify among the 123 items composing the research questionnaires those statements which could be construed as especially dependable and "future-worthy" conjectures. The selection process was based on a number of primary assumptions underlying prevalent future models, and arbitrarily--albeit conservatively--chosen statistical thresholds applied to five measures: four five point scales rating the perceived probability, date of occurrence, acceptance and desirability of the stated changes as well as an assesment of the consensus shared on the first three scales during a second iteration.

The procedure has a number of shortcomings. First, the statements ultimately listed as future-worthy were not necessarily selected for the same reasons. Some were also selected more than once. Second, no consideration was given to the fact that the four study scales were probably correlated. Three, nothing is said about the numerous statements which were rejected. Finally, this procedure does not allow the ranking of the selected statements in terms of their relative importance or weight in a forecasting process.

These difficulties are alleviated if a suitable comprehensive index is devised in order to ascribe a single synthetic "future value" to each of the forecasted changes.

Each statement can then be distributed along a continuum and the pattern of the distribution analyzed.

Essentially the crux of the problem is to develop a method for meaningfully aggregating the five basic measures provided by the questionnaires. One avenue is to posit the function:

$$(1) \quad F=f(C,P,T,A,D)$$

where F is an index of the "future value" of a given statement, i.e. a measure of the assumed reliability of the forecasted change based on the already discussed assumption of future models; C is the consensus level shared on the final iteration; P is the perceived probability of the change as measured by the probability scale; T is the perceived probable date of the change as measured by the date scale; A is the perceived acceptance of the change as measured by the acceptance scale; and D is the expressed desirability of the change as measured by the desirability scale.

If the five point probability, date, acceptance and desirability scales are similarly treated as bi-polar measures symmetrical about a zero mid-point, their left side being increasingly positive in terms of "future value", and their right side increasingly negative, then, (1) can be written:

$$(2) \quad F \propto (C, P, T, A, D), \text{ or}$$

$$(3) \quad F = K(C, P, T, A, D)$$

where K is a constant of proportionality. However, the mathematical nature of the involved relationships cannot possibly be known, let alone empirically verified, for future reality is non-existent. Therefore, K is impossible to evaluate. Nevertheless, an arbitrary operational definition can be assigned to F, provided the index performs satisfactorily and is consistent within a number of constraints such as the following:

1. The index should possess both a direction and a magnitude indicative of whether or not a given change is likely to occur and to what extent.
2. C is the dominant factor among C, P, T, A, D whereas P, T, A, and D essentially share the same relative importance.
3. Ideally, F should be construable as a percentage of a perfect score of ± 100 .

The following index fulfills these requirements:

$$(4) \quad F = C(P+T+A+D)$$

where C is a weighting factor ranging from 0 to 4; P, T and A are scale means obtained from the first assessment and ranging from +6 to -6; D is a scale mean ranging from +7 to -7.

The range of each factor has been arbitrarily determined so that the index score of a given statement will tend towards a maximum value of 100 when all five measures are positive and high, indicating a very likely change. Conversely, it will tend towards -100 when all five measures are high but the P, T, A and D factors are all negative, indicating a very unlikely change. It will tend towards 0 when either one of the following conditions obtains: (1) C is low; the change is probably controversial in nature. (2) P, T, A, and D all tend towards 0; the statement is probably irrelevant or ambiguous. (3) The dyads (P, T) and (A, D) are contrary in signs; either the change is seen as undesirable but inevitable or else as desirable but impossible to achieve.

Table IV lists the index ratings of the 123 statements in decreasing order. The distribution is characterized by a median score of 15 (statement 28.), upper and lower quartiles of 51 and -6 (statements 93. and 55. respectively), and maximum and minimum values of 92 (statement 102.) and -72 (statement 120.).

TABLE IV
STATEMENTS SCORES ON COMPREHENSIVE
INDEX OF "FUTURE VALUE"

| Statement number | Statement rating | Statement number | Statement rating | Statement number | Statement rating |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 102. | 92 | 46. | 24 | 87. | 0 |
| 73. | 88 | 104. | 24 | 90. | -2 |
| 53. | 80 | 100. | 24 | 109. | -2 |
| 83. | 76 | 74. | 24 | 88. | -2 |
| 99. | 68 | 89. | 24 | 30. | -2 |
| 101. | 68 | 42. | 22 | 3. | -3 |
| 117. | 68 | 105. | 22 | 107. | -3 |
| 77. | 64 | 44. | 22 | 116. | -4 |
| 108. | 64 | 60. | 22 | 58. | -6 |
| 51. | 60 | 36. | 21 | 62. | -6 |
| 34. | 60 | 66. | 21 | 55. | -6 |
| 48. | 56 | 27. | 21 | 7. | -6 |
| 106. | 56 | 21. | 18 | 84. | -6 |
| 63. | 56 | 76. | 18 | 97. | -6 |
| 22. | 56 | 41. | 18 | 39. | -8 |
| 122. | 56 | 65. | 18 | 5. | -8 |
| 86. | 56 | 16. | 16 | 67. | -9 |
| 121. | 56 | 23. | 16 | 24. | -11 |
| 70. | 54 | 118. | 16 | 31. | -12 |
| 72. | 52 | 18. | 16 | 123. | -14 |
| 112. | 51 | 28. | 15 | 4. | -14 |
| 94. | 51 | 80. | 15 | 38. | -16 |
| 69. | 48 | 25. | 15 | 50. | -18 |
| 79. | 48 | 11. | 12 | 111. | -20 |
| 37. | 44 | 8. | 12 | 49. | -20 |
| 110. | 44 | 113. | 12 | 95. | -21 |
| 92. | 44 | 40. | 12 | 17. | -24 |
| 115. | 42 | 75. | 12 | 19. | -24 |
| 98. | 42 | 1. | 10 | 57. | -24 |
| 119. | 38 | 59. | 9 | 91. | -28 |
| 93. | 36 | 15. | 8 | 14. | -30 |
| 32. | 36 | 33. | 8 | 64. | -32 |
| 114. | 36 | 43. | 8 | 2. | -32 |
| 47. | 36 | 71. | 8 | 54. | -32 |
| 61. | 36 | 45. | 8 | 35. | -32 |
| 68. | 33 | 20. | 8 | 13. | -38 |
| 56. | 33 | 52. | 6 | 16. | -39 |
| 82. | 33 | 81. | 3 | 6. | -42 |
| 96. | 28 | 12. | 2 | 26. | -44 |
| 10. | 28 | 103. | 2 | 29. | -56 |
| 85. | 27 | 9. | 0 | 120. | -72 |

Following is the list comprised of the twenty most likely changes in order of probability. The first parentheses give the index rating and the second the complete prognosis.

102. A ministry of sports and leisure will be created.
(92) (highly probable; before 1980; population highly in favor; highly desirable)
73. The "Renous" route linking Grand Falls and Newcastle will be completely paved.
(88) (highly probable; before 1980; population highly favorable)
53. Maritime researchers will find a solution to the damaging of spruce trees by bud worms.
(80) (probable; before 1980; population highly in favor; highly desirable)
83. The whole territory of New Brunswick will be covered by a French television network.
(76) (probable; 1981-1990; population highly in favor; highly desirable)
99. There will be a French law school in New Brunswick.
(68) (probable; 1981-1990; population generally in favor; highly desirable)
101. An ocean study centre will be developed in New Brunswick (possibly at Collège de Bathurst).
(68) (probable; 1981-1990; population highly in favor; highly desirable)
117. A deep sea port will be built at Gros-Cacouna which will benefit the Marevian economy.
(68) (probable; 1981-1990; population highly in favor; highly desirable)
77. Daily flights will exist between every city of the Maritimes.

- (64) (probable; 1991-2000; population highly in favor; highly desirable)
108. A professional or semi-professional French theatre company will counterpart the present English company now based in Fredericton.
- (64) (probable; 1981-1990; population generally in favor; highly desirable)
51. Numerous small factories producing small wooden items will appear in small communities.
- (60) (probable; 1981-1990; population generally in favor; highly desirable)
34. French-speaking farmers will create a union of agricultural producers similar to Quebec's U.P.A.
- (60) (probable; 1981-1990; population highly in favor; highly desirable)
48. Exploitation of a variety of marine plants will form the basis of an important coastal industry.
- (56) (probable; 1991-2000; population highly in favor; highly desirable)
106. A huge nature park will be developed in central New Brunswick for purposes of conservation, education and participation in sports having limited ecological impact such as camping, cross-country skiing, hiking, horse-riding, canoeing, etc.
- (56) (probable; 1991-2000; population generally in favor; highly desirable)
63. The project of a tidal power plant in the Bay of Fundy will become a reality.
- (56) (probable; 1981-1990; population generally in favor; highly desirable)
22. A massive return of Maritimers living outside their native province will be witnessed.
- (56) (probable; 1981-1990; population generally in favor; highly desirable)
122. A CBC transmitter located West of Grand Falls will make the French national network present in the whole of Marévie.

(56) (probable; 1981-1990; population generally in favor; highly desirable)

86. Smaller centers will experience a new vitality as population begins to flow back from larger centers.

(56) (probable; 1981-1990; population generally in favor; highly desirable)

121. A T.V. station based in Edmundston will replace CJBR on channel 13.

(56) (probable; 1991-2000; population generally in favor; highly desirable)

70. The "Acadian Trail" between St. Leonard and Campbellton will be completely rebuilt in accordance with high speed highway standards (60 mph).

(54) (probable; 1981-1990; population highly in favor; highly desirable)

72. A freeway linking St. John, Moncton and Halifax will be built.

(52) (probable; 1981-1990; population generally in favor; highly desirable)

At the opposite end of the spectrum, here are the twenty most unlikely changes in order of decreasing improbability of occurrence.

120. Le Madawaska will cease publication.

(-72) (highly improbable; never; population highly opposed; highly undesirable)

29. New Brunswick will face a critical shortage of physicians.

(-56) (hard to predict; not before fifty years; population highly opposed; highly undesirable)

26. Unemployment rate in New Brunswick will double its present level.

(-44) (hard to predict; 1981-1990; population highly opposed; highly undesirable)

6. Magdalen Islands will become part of one of the Maritime provinces.
(-42) (highly improbable; never; population highly opposed; neither desirable nor undesirable)
16. The Acadian population will significantly decrease.
(-39) (hard to predict; not before fifty years; population highly opposed; highly undesirable)
13. Van Horne will make a comeback on the New Brunswick political scene.
(-38) (highly improbable; never; population highly opposed; highly undesirable)
35. Potato farming will lose its preponderance as a crop in the upper Saint-John River valley.
(-32) (hard to predict; 1991-200; population highly opposed; highly undesirable)
54. All coal mines in Nova Scotia will be closed down.
(-32) (highly improbable; never; population highly opposed; highly undesirable)
2. Charlottetown will become the capital of the Maritime Union.
(-32) (highly improbable; never; population undecided, apathetic or divided; neither desirable nor undesirable)
64. Construction of hydro-electric power dams will be banned in New Brunswick.
(-32) (improbable; not before fifty years; population undecided, apathetic or divided; neither desirable nor undesirable)
14. An important population decrease will occur in the Maritimes.
(-30) (improbable; not before fifty years; population generally opposed; highly undesirable)
91. Approximately one third of the population of Fredericton will be francophone.
(-28) (improbable; not before fifty years; population generally opposed; desirable)

57. Some New Brunswick pulp and paper mills will shut down forever.
(-24) (probable; 1991-2000; population highly opposed; highly undesirable)
19. Governmental policies will foster immigration of large numbers of people from the Third World.
(-24) (hard to predict; not before fifty years; population generally opposed; undesirable)
17. The Acadian population will go through a new "revenge of the cradle" phase.
(-24) (improbable; not before fifty years; population undecided, apathetic or divided; neither desirable nor undesirable)
95. The teaching of trades will be fully integrated into the senior high school system.
(-21) (improbable; not before fifty years; population generally opposed; undesirable)
49. Overexploitation of forests in New Brunswick will bring about a significant decline of the forest industry in that province.
(-20) (probable; not before fifty years; population highly opposed; highly undesirable)
111. Moncton will be the scene of violent outbursts opposing anglophones and francophones.
(-20) (improbable; not before fifty years; population generally opposed; highly undesirable)
50. The relative importance of the larger forest companies (Fraser, Irving, C.I.P., etc.) will considerably diminish when compared with the whole of the forest sector.
(-18) (improbable; not before fifty years; population undecided, apathetic or divided; neither desirable nor undesirable)
38. Most farms will belong to large joint-stock companies (such as McCain).
(-16) (probable; 1991-2000; population generally opposed; highly undesirable)

DIFFERENCES BETWEEN STUDENT AND NON-STUDENT IMAGES

A stated objective of this study reads: "to explore the possibility of using the Delphi method as a mean for eliciting environmental perceptions of various study groups of people" (p. 6). An implicit hypothesis related to this objective is that subjects having different socio-economic characteristics and life experiences will differ in their perception of the environment. In turn their vision of the future will vary accordingly.

However, evidence accrued by Delphi experimenters suggests that different groups and subgroups generally do not express significantly different opinions when participating in the same or comparable exercises, especially when goals or value judgements are involved (v.g. Turnbull's experiments reported by Mitchell, 1971). Realizing that ratings obtained from college students were virtually identical to those gathered at greater expense from "genuine" experts, Walty (1972 or 1973) even submits that "...it is highly questionable whether 'experts' have any function other than providing prestige to the exercise". Yet Dalkey (Dalkey et alii, 1972) in other Delphi studies observed "an identifiable difference between men and women on both accuracy and changeability" (p. 43) as well as differences related to college major (p. 44).

The collective image of the future of the Maritimes exposed in the preceding pages is composed of two major components: the student and the non-student images. Do the two differ and how?

A close examination of the results failed to produce any consistent response patterns connected with either one of the two study subgroups nor any appreciable divergence of the ratings on any scale for any of the 123 statements on both iterations. Similarly, consensus levels reached by the two subgroups were amazingly similar for most items, being identical in twenty-four cases and differing by only one or two "votes" in seventy-three instances. Differences of three or more votes were recorded in twenty-six cases, but not a single statement yielded a statistically significant variance. In the ninety-nine cases where consensus levels differed, consensus was greater among students forty-five times and among non-students forty-four times.

Since the small size of the sample subgroups made statistical significance of the observed divergences unlikely, a brief look at the five most contrasted images is justified. In these cases, differences in consensus levels between the two subgroups varied from 33% to 53%. The statement is followed by the collective prognosis then by the consensus levels reached by each subgroup.

13. Van Horne will make a comeback on the New Brunswick political scene.

(highly improbable; never; population highly opposed; highly undesirable)

(consensus: students, 47%, controversial; non-students, 100%, unanimity)

This item, which was included in the sequence as a humorous diversion and to some extent as a validity test for the research method, finally resulted in the largest observed disagreement between the two study subgroups.¹ Student dissenters mainly felt this "change" to be unpredictable rather than highly probable and neither desirable nor undesirable instead of highly undesirable.

7. For administrative purposes, New Brunswick will be divided in two parts: the Southern or anglophone half and the Northern or francophone half.

(hard to predict; not during the next fifty years; population generally opposed; undesirable)

(consensus: students, 47%, controversial; non-students, 87%, moderate consensus)

¹Van Horn is undoubtedly the most colorful political figure of New Brunswick this century. Following his early retirement as a member of parliament, he made a series of spectacular comebacks into provincial politics. Once leader of opposition, he eventually became the first minister of tourism of the Province. Finally forced to resign his position in the cabinet as a result of a political scandal, his numerous supporters believed the "mishap" to be but a temporary setback. Two weeks after the completion of this research he pleaded guilty to a charge of illegally using his influence.

Contrary to other respondents, student dissenters felt the change to be both probable and desirable, that it would come about before the turn of the century and would be generally well accepted. The dissentient group being essentially composed of student activists, the feeling is imparted that this one is perhaps not a dead issue.

11. What is now a third party will form the official opposition in New Brunswick.

(probable; 1991-2000; population generally favorable; desirable)

(consensus: students, 87%, moderate consensus; non-students, 53%, high dissension)

Although a strong consensus that this change is desirable did emerge in both subgroups, dissenters, mainly non-students, viewed the rise of present left-wing third parties as improbable rather than probable. This group probably uttered a defeatist attitude concerning the future of these parties more than a feeling of satisfaction with the traditional bi-party regime of New Brunswick.

113. The Société des Acadiens du Nouveau-Brunswick will make way to a much more radical movement.

(probable; 1981-1990; population undecided, apathetic or divided; desirable)

(consensus: students, 93%, high consensus; non-students, 60%, moderate dissension)

Non-student dissenters generally disagreed that this is a probable or desirable change. Most of them opposed any form of ethnic radicalism, although some felt the change to be pointless.

123. Independance of the "Republic" will be seriously discussed.

(highly improbable; never; population undecided, apathetic or divided; highly undesirable)

(consensus: students, 60%, moderate dissension; non-students, 93%, high consensus)

Despite an unmistakable dissension among students, no clear pattern emerged from an analysis of dissentient responses. It seems probable that reasons behind the conflictual opinions are varied, and that the magnitude rather than the directionality of the majority reaction was being challenged. This statement obviously being more of a concluding teaser than a serious issue, the lack of an unambiguous consensus is somewhat puzzling. If indeed minority responses were not "counter-teasers"--there is no indications that they were--then the hypothesis is confirmed that the "Republic" constitute for some people more than an innocent trademark of the local tourist industry.

In final analysis, the student and non-student pictures, aside from the five exceptions discussed above, dif-

fer very little. Whether this was induced by the research procedure itself or else is a reflection of a true consensus shared by members of the same culture group is open to conjecture. It may be argued, for instance, that the apparent similarity of the two sets of images is largely artificial. On one hand, the non-student subgroup did not participate in the development of the previsional statements or "brainstorming" phase of the experiment. On the other hand, results of the assessment phase were allowed to be mixed and indiscriminantly fed back to all participants for reassessment.

This suggests a replication of the study where two distinct but homogeneous subgroups would each generate its own list of statements and then work independantly towards a subgroup consensus. A content analysis of the statements would determine the convergent and divergent concerns of each group. A statistical comparison of the prognoses, where possible, would no doubt yield valuable insight into attitudes held by members of each group.

OTHER RESULTS

The preceding pages depicted the future of the Maritimes as seen by the participants in the study. A cross-examination of the results is now attempted in an effort to highlight the spatial and thematic contents of this future. Particular attention is also paid to prognoses generated for some popular issues. Finally, surprise items, i.e. unanticipated forecasts, are briefly reviewed.

Perception of space

The basic postulate of this study is that the predictions emerging from this kind of exercise do not at all constitute predictions in the real sense but projections of attitudes shared by the participants. The predictive value of these anticipations effectively rests on the assumption that collective behavior is governed by collective attitudes and thus the more widespread these attitudes are, the more likely the expected change will come about. Since the study sample as a group share attitudes and concerns which probably differ from those shared by other groups of persons elsewhere in the Maritimes, the future value of the consensus forecast suggested in this paper is decreased unless its particular biases are properly identified and taken into account. Space perception and space preferences of the par-

ticipants provide a good example of such bias. For instance, to what extent is the forecast representative of the concerns of Prince Edward Island when only one statement deals with a problem specific to this province (statement 68.)?

An analysis of the spatial content of the future of the Maritimes as perceived by the participants is in fact worthwhile for many reasons. It can bring forth the spatial bias of the participants as "predictors" for the whole region. It may yield useful data for planning purposes by showing spatial preferences of the respondents. It can provide a measure of parochialism. It could even pay theoretical dividends.

The 123 statements were classified into five distinct categories according to their spatial reference: local (Maddawaska), provincial (New Brunswick), regional (the Maritimes), others (Nova Scotia and Prince Edward Island), and unspecified. Most statements included in the latter category constitute changes which could occur in either one of the three provinces making it impossible to specifically assign them to any one of the other categories.

This classification is arbitrary in at least two ways. One, it considers but a portion of the original list of over 800 provisional items generated by the students and therefore

is not necessarily representative of their spatial concern. Second, some statements constitute alternatives and thus should really be counted as one (e.g. statements 2., 3., and 4.).

Table v shows the distribution among these categories of the 123 working statements as well as the twenty statements ranking top on the comprehensive scale.

TABLE v
SPATIAL CONTENT OF FUTURE IMAGE

| Spatial Categories | All Working Statements (N=123) | (%) | Top Ranking Statements (N=20) | (%) |
|--------------------|-----------------------------------|-----|----------------------------------|-----|
| Local | 14 | 11 | 3 | 15 |
| Provincial | 57 | 46 | 9 | 45 |
| Regional | 19 | 15 | 2 | 10 |
| Others | 5 | 4 | 1 | 5 |
| Unspecified | 28 | 23 | 5 | 25 |

The high correlation between these two distributions ($r=0.98$) suggests that the student and non-student sub-groups share very similar spatial concerns. Contrary to expectations, no distance decay function is readily apparent. Depending on which distribution is examined, "local" changes are three to four times less numerous than "provincial" ones. But "provincial" changes are also three to four times more

numerous than "regional" ones and remain more numerous even when the "regional" and "unspecified" are lumped together. Among other things, this confirms the impression acquired throughout the study that the province, not the Maritime region is the primary focus of territorial identification to the participants. Republicans are definitely not concerned with Nova Scotia and Prince Edward Island issues. In fact, interprovincial competition even shows through some statements. For instance, forty percent of the respondents felt the following change to be desirable and sixteen percent highly desirable:

80. St. John will definitively establish its supremacy over Halifax as a sea port.

Similarly, more than half agreed the following to be probable in a distant future:

87. St. John will become the largest city of the Atlantic region.

Replication of the study in other areas of the Maritimes would be most interesting. The mental distance between groups living in geographically distinct milieux could be assessed and areas of conflict identified. Perhaps more important, so would zones of agreement.

Thematic content

The 123 statements are grouped on the working list under fifteen headings lettered from A to O (see Appendix

I or II). Again these groupings are somewhat arbitrary and not always mutually exclusive. Nevertheless, when statements classified under section O (Marévie)--a spatial rather than thematic category--are properly redistributed among other sections, a convenient way of assessing the interests of participants is provided.

Table VI gives the frequency distribution of the statements among the fourteen thematic classes as well as the decreasing order of size of the classes.

TABLE VI
DISTRIBUTION OF STATEMENTS AMONG THEMATIC CLASSES

| Theme | No of Statements |
|--------------------------------------|------------------|
| J. Transportation and Communications | 20 |
| A. Politics and Territory | 14 |
| D. Agriculture | 13 |
| B. Population | 12 |
| L. Education | 12 |
| K. Urbanization | 8 |
| C. General Economy | 7 |
| H. Manufacturing | 7 |
| M. Sports and Leisure | 7 |
| N. Culture | 7 |
| F. The Forest | 5 |
| I. Energy | 5 |
| E. The Sea | 4 |
| G. Mining | 2 |

It can be seen that all major traditional concerns of regional geography are fairly well represented, together with more dernier cri topics such as education and sports and leisure. The relative size of each class is more puzzling. Why do students seemingly care so much for transportation and communications and so little for primary resources (agriculture being an exception)?

When non-student opinions are accounted for, that is to say when the twenty top rating statements only are considered, as in table VII, this imbalance is even further amplified. Eight out of twenty, i.e. forty percent of the most likely changes pertain to transportation and communication. The second class in importance deals with sports and leisure followed by forestry and education. The politics and territory category which occupied the second position in the statement list is altogether absent from the short list of high ranking predictions. To be sure, politics spells controversy by definition. But why are general economy, mining and manufacturing also left out? Is affluence taken for granted in coming years? The following prognosis which was put forward by eighty percent of the participants (future value=56) is an indication of this kind of optimism.

22. A massive return of Maritimers living outside their native province will be witnessed.

(probable; 1981-1990; population highly in favor;
highly desirable)

TABLE VII
DISTRIBUTION OF THE TWENTY TOP RANKING
STATEMENTS AMONG THEMATIC CLASSES

| Theme | No of Statements |
|--------------------------------------|------------------|
| J. Transportation and Communications | 8 |
| M. Sports and Leisure | 3 |
| F. The Forest | 2 |
| L. Education | 2 |
| B. Population | 1 |
| D. Agriculture | 1 |
| E. The Sea | 1 |
| I. Energy | 1 |
| K. Urbanization | 1 |
| A. Politics and Territory | 0 |
| C. General Economy | 0 |
| G. Mining | 0 |
| H. Manufacturing | 0 |
| N. Culture | 0 |

A more realistic explanation can perhaps be based on the often heard observation that "Republicans" form among a minority ethnic group a marginal subgroup living in a peripheral area of New Brunswick, a province which is part of an already underprivileged region of Canada. It is small wonder then that consensus is low on political and economic issues since the participants belong to a group which is virtually absent from so many vital decision centers.

This "minority complex" also finds expression in the large number of statements with an ethnic overtone. Among the original 123 statements, 21% display ethnic preoccupations. This proportion climbs to 26% for the top ranking subset, a difference which is statistically significant.

From a different point of view, about 20% of all working statements express a primary concern for the quality of life and what might be called social amenities, e.g.:

29. New Brunswick will face a critical shortage of physicians.

Again this proportion is higher for the twenty top statements.

In final analysis, when the twenty most likely changes are reordered by topic, the future of the Maritimes as imagined by the participants suddenly becomes coherent and major orientations emerge. It is a society characterized by:

(1) increased mobility,

.of people, e.g.:

77. Daily flights will exist between every city of the Maritimes.

.of ideas, e.g.:

83. The whole territory of New Brunswick will be covered by a French television network.

.of goods, e.g.:

117. A deep sea port will be built at Gros-Cacouna which will benefit the Marevian economy.

(2) decentralization,

- of people, e.g.:

86. Smaller centers will experience a new vitality as population begins to flow back from larger centers.

- of industry, e.g.:

51. Numerous small factories producing small wooden items will appear in small communities.

(3) leisure,

in particular, recreation opportunities will be improved through,

- better organizations and management, e.g.:

102. A ministry of sports and leisure will be created.

- the protection of nature, e.g.:

106. A huge nature park will be developed in central New Brunswick for purposes of conservation, education and participation in sports having limited ecological impact such as camping, cross-country skiing, hiking, horse-riding, canoeing, etc.

- and increased emphasis on the performing arts, e.g.:

108. A professional or semi-professional French theatre company will counterpart the present English company now based in Fredericton.

Popular issues

The role played by mass media in shaping the consensus on social values and goals shared by a given culture group is often taken for granted. For instance, some would argue that people's images of the future are presumably very much induced by radio, television and the press.

A collective forecast such as the one developed in this study probably matches the picture a keen observer could form from a content analysis of relevant news media.¹

To be sure, even a cursory examination of the 123 previsional statements reveals that most of the items were indeed inspired by current headlines: the Canadian migration policy (e.g. statements 18. and 19.); foreign ownership of land and resources (e.g. statement 44.); the energy crisis (statements 63. to 69.); the nationalization of public service companies (statements 74. and 82.); the on-going review of French language higher education in the Maritimes; and so on. It is also interesting to note that the majority of the stated changes pertaining to these popular issues scored rather low on the comprehensive scale. The question therefore is whether mass media build consensus or create discussion and discord.

It falls beyond the scope of this essay to review all the popular issues addressed by the study, but the following three deserve particular attention:

- (1) the proposed political unification of the Maritime Provinces,

¹Fowles (1975) claims that broad sociocultural changes can be anticipated by a decade through a close scrutiny of mass advertising.

(2) the Maritimes as an economically depressed region of Canada, and

(3) the fate of the Bricklin car.

Maritime Union

The pre-confederation project of joining the three Maritime provinces has been revived in recent years. In 1970 a "Maritime Union Study Group" prepared a step-by-step plan designed to bring about a full political union by 1980. Opposition may still kill the grandiose scheme and the real stumbling blocks lie ahead. New Brunswick Acadians in particular fear they will lose their cultural identity when their numbers become diluted in the combined population.¹

Five statements (1. to 5.) deal with the matter. Here is the respondents' prognosis:

1. The Maritime Provinces will form a political union.
(consensus level: 77%; a probable change; 1981-1990; population undecided, apathetic or divided)

The desirability scale is indicative of the deep conflict over the question (table VIII). The modal answer is "desirable" whereas both the median and average are "neither desirable nor undesirable".

¹For a more detailed look at the issue see articles in Canada and the World, January 1971, April 1972 and May 1973.

TABLE VIII
DESIRABILITY OF MARITIME UNION

| Response Categories | Response Distribution | |
|-----------------------------------|-----------------------|-----|
| | (N=30) | (%) |
| Highly desirable | 2 | 7 |
| Desirable | 11 | 37 |
| Neither desirable nor undesirable | 6 | 20 |
| Undesirable | 5 | 17 |
| Highly undesirable | 6 | 20 |

The change scored positively on the comprehensive scale (+10) but occupies the seventieth place in the rank order of statements. In short, reliable prediction cannot be inferred from these results; the Union is coming; it will be delayed; and the balance can still be tipped. The issue remains.

Three statements respectively proposed Charlottetown, Moncton and Halifax as the most likely capital city of the hypothetical union (statements 2., 3., and 4.). All three scored negatively on the comprehensive scale. Charlottetown is definitely ruled out as one of the twenty bottom ranking items. Halifax did not score much better taking the twenty first position from last. Moncton is therefore seen as the

"least unlikely" future capital.

Of course the idea of a four province Atlantic Union met with even more resistance.

5. Newfoundland and Labrador will seriously discuss with the Maritime Provinces the possibility of forming a political union of the four Atlantic provinces.

(Future value: -8; consensus level: 77%; improbable; never or not before fifty years; population undecided, apathetic or divided; undesirable)

Maritime poverty

The relative poverty of the Maritimes has been blamed on everything from geographical size and location to physical and political fragmentation and structural faults of the Confederation (e.g. Hamelin, 1973, pp. 75-76). Few writers have questioned the attitudes of Maritimers in the face of economic challenges. The rating of statements dealing with the general economic picture of the region tend to demonstrate the defeatist outlook of the participants. Examples:

25. The relative economic lag of the Maritimes behind the rest of the nation will have been reduced to practically nil.

(consensus level: 80%; improbable change; never or not before fifty years; population highly in favor; highly desirable)

26. Unemployment rate in New Brunswick will double its present level.

(consensus level: 90%; unpredictable; possible between 1980-1990; population highly opposed; highly undesirable)

In other words, if an economic change is desirable, it probably will not occur and vice versa.¹ Similarly, New Brunswick dependancy on federal monies is bound to increase. Worse, one quarter of the respondents say that the increase is "highly desirable" and a second quarter believes it is "desirable". In fact, less than one third say that the change is either "undesirable" or "highly undesirable".

27. More than half of the New Brunswick government revenue will be provided by federal government sources.

(consensus level: 87%; probable change; 1991-2000; population generally in favor; desirable)

One therefore is inclined to agree with Hamelin (1973, p. 76): "If the cultural destiny of Confederation is being worked out in Quebec, its economic destiny is a matter for the Atlantic Provinces".

The Bricklin

Perhaps the most controversial issue to hit New

¹Following Helmer (1972, pp. 48 and 50) such views of the future often constitute "nonforecasts" of "anticatastrophe". A nonforecast is a myth about the future, i.e. a firm belief that a given development will or will not occur because of conditions which are wrongly assumed to exist. An anticatastrophe is a low probability event which is highly beneficial and desirable. Statement 25. is an anticatastrophe. The prognosis is a nonforecast because predictors are convinced it cannot happen whereas there are no definitive reason why it should not.

Brunswick in several years has been the government decision to develop a local auto industry. Bricklin Canada Ltd, a two-thirds government-owned corporation, is currently manufacturing the futuristic vehicle dreamed by Californian Malcolm Bricklin. The province heavy financial involvement in the project has of course met with considerable opposition, and prophets of doom have been numerous from the start.¹

The number of statements related to the issue (three) provides a measure of student interest. Will the Bricklin survive? The participants say no, but the consensus is thin: 60. Bricklin will definitively shut up shop in New Brunswick. (consensus level: 70%; a highly probable change; before 1980; population generally opposed; highly undesirable)

Amazingly, the car is nevertheless foreseen to become a good seller abroad:

¹The Bricklin controversy has been well covered by local newspapers such as the Saint-John Telegraph-Journal. Many articles also appeared in the Financial Post. See also the short but superior account: "New Brunswick: cars and kickbacks?" (White, 1975). Disc jockey Charlie Russell of CJCJ Woodstock elegantly summarized many of the feelings towards the Bricklin in a popular tune which is selling more copies than the sports car. The chorus goes:

Oh the Bricklin, oh the Bricklin
Is it just another Edsel?
Wait and see
We'll let the Yankees try it--
and hope to God they'll buy it.
Let it be, Dear Lord, let it be.

61. Bricklin cars will be exported in large numbers towards most of the major industrialized countries

(consensus level: 87%; a probable change; before 1980; population generally in favor; highly desirable)

When this apparent contradiction was taken up with some of the participants, they quickly pointed out that political turmoil and the lack of managerial experience might cause the company's collapse in spite of the commercial success of the product. Moreover, competing manufacturers who now supply some of the car's components could easily make difficulties if competition for a declining market got too tight.

At any rate, the sample did not expect the company to diversify its production:

63. Bricklin cars will be manufactured in many different models.

(consensus level: 73%; unpredictable; not before fifty years; population undecided, apathetic or divided; neither desirable nor undesirable)

Unexpected expectations

To complete this discussion of the substantive aspects of the results, a look at some of its more surprising elements is appropriate. To be sure, what is surprising to this writer might well be stale news to another observer and vice versa. However, anticipations which did not naturally sprout

from media coverage have special significance when they represent novel departures from observable trends. Three topics are considered: agriculture, ocean resources and Moncton as a metropolis.

Agriculture

Undoubtedly, the most unsuspected outcome of the study is the participants' unusual interest for agriculture. Not only was the number of statements dealing with agriculture high, but the foreshadowed changes disclosed truly positive attitudes towards farming. If the participants are right:

32. A strong "back to the countryside" movement of population will occur in New Brunswick.

(consensus level: 80%; a probable change; 1981-1990; population generally in favor; highly desirable)

33. New Brunswick will come to be known as one of the Canadian provinces specialized in agriculture.

(consensus level: 70%; a probable change; not before fifty years; population generally in favor; highly desirable)

The revived agriculture will emphasize animal rearing:

41. Many specialized farms will appear where animals like horses and rabbits, which are not at the moment very popular slaughter animals, will be raised.

(consensus level: 80%; a probable change; 1991-2000; population generally in favor; highly desirable)

Farming will also be characterized by:

- cooperative enterprises

37. Most farms will join coop enterprises.

(consensus level: 90%; a probable change; 1981-1990;
population generally in favor; highly desirable)

- farmers unions federated along ethnic lines:

34. French-speaking farmers will create a union of agricultural producers similar to Quebec's U.P.A.

(consensus level: 90%; a probable change; 1981-1990;
population highly in favor; highly desirable)

- and protection from land speculation:

44. A law will forbid selling land designated as farm land unless the new owner intends to actively farm it.

(consensus level: 77%; a probable change; 1981-1990;
population highly in favor; highly desirable).

Ocean resources

Although participants showed much less interest in fisheries, a number of startling views nevertheless emerged regarding ocean resources. The following change was perhaps not entirely unexpected, but the strenght of the ratings certainly was:

63. The project of a tidal power plant in the Bay of Fundy will become a reality.

(consensus level: 90%; a probable change; 1981-1990;
population generally in favor; highly desirable)

The next two, however, constitute much more imaginative surmises. They apparently have never been the subject of

public discussion, and yet there is no question as to their plausibility.

48. Exploitation of a variety of marine plants will form the basis of an important coastal industry.
(consensus level: 100%; a probable change; 1991-2000; population highly in favor; highly desirable)
101. An ocean study centre will be developed in New Brunswick (possibly at Collège de Bathurst).
(consensus level: 93%; a probable change; 1981-1990; population highly in favor; highly desirable)

Moncton, the metropolis

In recent decades Moncton has become the cultural capital of the Acadian people despite incessant rivalry from smaller northern centers like Bathurst and Edmundston. "Republicans" in particular have displayed their dissociation from Acadia on numerous occasion (see for instance Whebell and Williams, 1974). The following prognoses are therefore rather confounding:

85. The population of Moncton will become as large as that of Saint John.
(consensus level: 87%; a probable change; 1981-1990; population generally in favor; desirable)¹
110. A prestigious cultural centre (place des arts) dedicated to the promotion of French culture in the Maritimes will be built in Moncton.

¹1971 populations: City of Saint John: 89,039; City of Moncton: 47,891. The metropolitan populations are of course larger, respectively 106,744 and 71,416 (Statistics Canada, Bulletin 1.1-8).

(consensus level: 93%; a probable change; 1981-1990;
population generally in favor; highly desirable)

Is Moncton the future metropolis of the Maritimes?
According to the results of this study, this appears to be
a legitimate eventuality.

DISCUSSION

In this section, the results and methodology of the experiment are reviewed in terms of their value for purposes of planning, education and theory building. By doing so, it will be made clear that the study should be primarily construed as illustrative of the potential of the Delphi method for geographical research and teaching and not as a sort of exercise in fortune-telling or crystal-ball gazing.

PLANNING

In particular no claim is made that the so-called "consensus forecast" developed in the paper can be relied upon for adequately predicting the future of the Maritime Provinces. Undoubtedly, some of the foreseen changes are more trustworthy than others, and to some extent these can be weeded out if the assumptions underlying the comprehensive index of "future-worthiness" are agreed upon. Similarly, many of the 123 items will probably come true as "predicted". But in final analysis, the value of the exercise for planning lies outside its predictive power.

Sample composition and stability

In fact, insofar as the production of reliable social prognostics is concerned, the procedure used in the study is fraught with inadequacies, some avoidable in principle but others inherent to Delphi. A most obvious shortcoming stems from the sample composition. Delphi experimenters would criticize the expertise and reputation of the participants. Similarly, most geographers would question their representativeness of the studied population.

These objections have already been discussed in preceding sections but it is not unuseful to dwell on the matter again. The problem of expert selection is paradigmatic: it boils down to a debate on basic assumptions regarding the nature of the future. In the physical sciences in general, and in any cases where sound theories explaining the relationships between cause and effect exist, the future is assumed to be an objective that is to say predictable fact and most predictions can be verified against reality on relatively short order, often in a controlled laboratory situation. However, expertise, i.e. scientific intuition is needed especially when science must be applied to problem solving. The role of experts is then to identify causes and effects and propose solutions based on current theories. "Expert" predictions are frequently implicit. A typical "problem

solving" prediction might read: "This treatment will cure this illness".

Predicting social change is something else. In that case, the future is assumed to be a collective creation resulting from countless decisions made by numerous interacting individuals. In turn, decisions are based on projected futures. Since each person projects his or her own set of futures, the "real" future can be conceived as the end product of clashing individually projected futures. A Delphi experiment under these circumstances can be regarded as a convenient technique for simulating the clashes of a sample of projected futures. Therefore what is required from the "social predictors" who participate in Delphi exercises such as the one reported here is not expertness on a subject matter but representativeness of the decision-makers involved in the debated issues.

The second objection--that the participants should be more representative--is therefore paramount. In order to adequately and accurately predict the future of the Maritimes, it is strictly necessary that all Maritimers be represented by the sample. Even then, everything else being equal, uncertainty would still remain about decisions affecting the Maritimes which are made outside the Maritimes. For this and other reasons, one must conclude that uncertainty about

the future can at best be only slightly reduced. However, this is not necessarily cause for pessimism.

These observations on the other hand point towards two avenues for further research. For one, replications of the study making use of more elaborate and representative samples are called for. A different approach consists in trying to determine if some "predictors" consistently produce more reliable conjectures than other subjects. Dalkey and Brown (1971) have tested Delphi with "short-range predictions". Similarly, selection rounds designed to measure the accuracy of participants in predicting the short term future of the Maritimes (say the next three months) might reveal "forecasting geniuses" (Gordon, 1971) who could then be enrolled in a long range study on the assumption that their highly perceptive intuition will not deceive.

Another albeit lesser difficulty with Delphi samples concerns their instability over time. On one hand it is probably inevitable that some of the initial participants drop out after each round. On the other hand, in view of the time elapsed between successive rounds, participants acquire new information which tend to alter their perception. Many participants indicated how their awareness had been increased by the exercise. This may explain why in a number

of cases, respondents disagreed in the reassessment phase with their own previous answer even though the latter was modal in the preceeding round. In the end it may be argued that the study sample is in fact an inconsistent let alone a different one from round to round. Of course this situation is probably advantageous rather than undesirable although there is no evidence that more informed participants necessarily make up better predictors.

This learning process suggests further studies where preliminary rounds would mainly serve the purpose of creating greater awareness of the issues involved. The early results of these "warm up" sessions would eventually be discarded and the experiment given a fresh start.

Statement ambiguity

The confidence which can be put in the predictive power of the consensus forecast is also limited by factors related to the wording of statements. Many of the items are too vague to be of any real practical value. This is normally due to one of the following reasons:

(1) the use of qualitative instead of quantitative wording;

examples:

15. An important population increase will occur in the Maritimes.
24. A significant increase of criminality and violence will be recorded in the Maritimes.

- (2) the statement refers to a sequence of events rather than to a single occurrence, e.g.:

112. A second French daily will be published which will survive in New Brunswick.

In particular, words like "development", "construction", etc. suppose a time span between the decision to proceed and the completion of the project. In the following examples, it is impossible to ascertain how the subjects interpreted the phrase "will be built" on the date scale:

66. A second nuclear power plant will be built in New Brunswick.

72. A freeway linking St. John, Moncton, and Halifax will be built.

- (3) the relative pervasiveness of the change is inadequately specified, e.g.:

86. Smaller centers will experience a new vitality as population begins to flow back from larger centers.

- (4) specific reasons are suggested for anticipations which may come about for other reasons, for instance:

20. The government of New Brunswick will set up its own family allowance program in order to increase birth rates.

100. Enrolment difficulties will force Université de Moncton into becoming officially bilingual.

Some of these shortcomings can be avoided when greater effort is made to be more specific. However, the broadness of many social issues frequently precludes precise wording unless specialized terminology is introduced.

Social desirability of responses

A third set of reasons for questioning the reliability of the forecast springs from the deliberate attempt to narrow down the range of responses elicited from the subjects. Although the Delphi technique was precisely developed in order to reduce the "bandwagon effect of majority opinion" and other unwanted psychosocial bias, its overt objective is nevertheless to arrive at a group consensus and it does so, quite artificially, by feeding back majority opinions and challenging dissenters. In this study, the reassessment questionnaire went as far as forcing respondents to choose between the two statements: "I generally agree with the majority" and "I strongly disagree with the majority".

Geographers familiar with research methods commonly used in social psychology studies will understandably frown at this naïve rashness. Sound psychological research always strives to avoid "loading" a specific answer. A great effort is normally made to neutralize the subject's tendency to respond in what he or she perceives to be a socially desirable fashion.

These concerns are not unjustified in typical psychological research where they derive from the quest to explain internal mental processes and the influence of environ-

mental events on observable behavior. But does it necessarily follow that "forced" consensi should be rejected?

Delphi as a projective technique

Operation researchers would answer this question with a straightforward "no". Their argument would go somewhat like this. The raison d'être of science is the search for truth. That of planning is more effective control of the environment. Scientists cannot compromise with certainty, but planners often must. Whenever no well confirmed body of scientific knowledge exists with which to tackle a specific problem, planners should resort to any method which reduces uncertainty rather than proceed with no method at all. Therefore if Delphi reduces uncertainty about the future, as indeed it appears it does, then the method has some merit.

Should geographers compromise with these views? Only if prophesying is desired at all costs. For the real value of Delphi lies not primarily in the social forecast which is produced by the method, but in the attitudes, motivations and preferences which are brought to light during the forecasting exercise. In other words, Delphi can be thought of as a sort of "projective" technique. By using the future as ambiguous stimulus material, subjects are led to express their private world, thereby providing information of great interest for planning.

For instance, areas of concern are identified. Changes perceived by the participants as desirable can be incorporated into planning objectives. Similarly, efforts can be undertaken to insure that undesirable or unacceptable changes do not come about. Before a planning strategy is adopted, the method can help to determine which groups are favorable to a contemplated change and which are opposed and why. Conceivably, priorities can be ranked so that political turmoil is minimized. Alternatively, planners may elect to accelerate change by concentrating on changes which are not anticipated in the near future although participants agree on their desirability. Ultimately, therefore, whether Delphi prophecies are fulfilled or defeated is largely dependant upon their use by planners and decision-makers.

EDUCATION

One objective of this study is to ascertain the merit of the Delphi technique as a learning medium. Time constraints prevented a formal evaluation of the experiment in this respect. However, general comments volunteered by the participants leave no doubt as to the educational value of the exercise, not only for the student subgroup but for the outside participants as well. In hindsight, it seems

that each phase of the experiment produced its own educational benefits. The "brainstorming" phase, for instance, in which only the students participated, developed a strong motivation for personal research. The students quickly realized that to produce a large number of plausible statements about future changes, imagination alone does not suffice: one must also be properly informed in the first place. This forced the students to discover and read informative material and to become keenly inquisitive about the general state of affairs in the Maritimes. On the other hand, the search for possible futures was relevant to each individual regardless of previous background and intellectual capacity.

If the brainstorming phase stimulated interest and involvement, the probability assesment phase had a much different impact on the participants. Initially the list of working statements caused quite a surprise. No one had really anticipated dealing with such a broad range of issues and it was obvious that in many cases the respondents were seriously thinking about an item for the first time. More important the subjects soon discovered that the probability of occurrence of many changes could not be estimated in isolation from the perceived probability of occurrence of many other related items. Many participants indicated that while answering the questionnaire, they began to feel a sense of contradiction which forced them to define their goals and values

and develop a comprehensive and integrated picture of the future, something they had never done before. This represents one of the most notable educational outcome of the whole exercise. Many participants realized that the future is largely self-determining and uncontrollable inasmuch as it results from piecemeal decisions which constitute reactions to the present state of affairs rather than "proactions" towards explicit goals.

In terms of educational value, the reassessment or consensus seeking phase can be described as a socialization experience. Participants generally welcomed the opportunity of confronting their views with those of other people in a neutral setting. An often expressed reaction was that individuals expected their "predictions" to differ much more systematically from the consensus. Many were amazed and quite satisfied to find out that they were not so different from other people after all. Of course, it is debatable whether people should be encouraged to think alike or differently, but they should at least have the opportunity to painlessly find out where they stand.

GEOGRAPHICAL THEORY

This study has emphasized the content of the images elicited from the participants. Little effort has been made

to explain why the participants imagined the future as they did. The primary concern of the essay is futures methodology rather than geographical theory. It is clear, however, that futures research in general and the Delphi technique in particular may very well pay some interesting theoretical dividends in many areas of interest to behavioral geographers. It has already been suggested, for instance, that the Delphi method could be used as a psychological "projective" test using the future as ambiguous stimulus material (see page 92). As such, it may serve some useful purposes in motivation research and perception studies. To give but one example, mental maps and spatial preferences can be elicited by Delphi exercises by exploring future distributions of people, residences, parks, etc. Similarly, it seems that the method can procure new and stimulating material for the understanding of the genesis of judgments and the interrelationships between different value systems.

SUMMARY AND CONCLUSION

Geographers, by and large, are either insufficiently aware of futures research or else unwilling for some obscure reason to engage in long-range time prospecting. They have nevertheless a valid contribution to make to the field. One option is to explore the realm of socially desirable alternatives for change. To this end, the Delphi technique, a research method widely employed by "think tank" organizations, appears to be a powerful tool.

This paper has attempted to use and evaluate the Delphi technique in an experiment designed to explore (1) how a sample of students and enlightened citizens view the regional geography of the Maritime Provinces, (2) how to increase the participants' awareness and understanding of the problems facing this region, and (3) how to apprehend some of the possible, probable and desirable futures of the Maritimes. The method appears to be highly promising on all three counts.

The results indicate that the views of the Maritimes held by the student and non-student subgroups differ very little except on some political issues where students ap-

pear to be somewhat more left-wing. The images elicited by the exercise show the sample to be more concerned with provincial issues than with either local or Maritime problems. This mild regionalism is compounded with a measure of French nationalism and a concern for the quality of life which is based on increased mobility, decentralization and recreation opportunities. The sample also displayed an unusual interest in agriculture and ocean resources and mixed feelings about some popular issues like the political union of the Maritimes.

As an educational experiment, this study undoubtedly produced many types of benefits. It called attention of the participants to a wide spectrum of important issues and stimulated their thinking seriously about them. It allowed a confrontation of views in a debate largely devoid of emotional factors, the end-product of which was the realization that people often share--or at least can develop--a consensus about a large number of basic questions. It also helped the participants to identify, articulate and modify some of their values and goals. Perhaps more important, it may have initiated a fundamental change of attitude: from a retrospective to a prospective outlook of their future.

Of course a major outcome of this study is the identification of a number of plausible changes that may occur

in the Maritimes during this and the next generation. Whether these changes will or will not come about is secondary inasmuch as their anticipation may serve to spark fruitful discussions and perhaps contribute to reduce "the number of surprises in store".

The essay repeatedly stressed that the predictive value of the forecasts resulting from the experiment is a function of the extent to which goals and values disclosed by the participants are shared by the decision-makers and the people of the Maritimes in general. There is therefore a definite need to learn about the views of the future of other people in other parts of the Maritimes and eventually to engage in a region-wide discussion about the desired and desirable long-term aims of the collectivity. Polak (1971, p. 351) writes:

Whoever decides the aims decides the shape of the future. This cannot be left to big industry, the C.I.A., the Pentagon or the President of the United States, nor to similar concentration of power elsewhere. This above all is a matter on which the views of the people as a whole should be heard.

APPENDIX ILISTE DES ÉNONCÉS PRÉVISIONNELSA. Politique et territoire

1. Les provinces Maritimes s'uniront pour ne former qu'une seule unité politique.
2. Charlottetown deviendra la capitale de l'Union des Maritimes
3. Moncton deviendra la capitale de l'Union des Maritimes.
4. Halifax deviendra la capitale de l'Union des Maritimes.
5. Terre-Neuve-et-Labrador discutera sérieusement avec les provinces Maritimes de la formation d'une union politique des quatre provinces de l'Atlantique.
6. Les Iles-de-la-Madeleine seront annexées à l'une des provinces Maritimes.
7. Pour des fins administratives, le territoire du Nouveau-Brunswick sera partagé en deux parties: le sud anglophone et le nord francophone.
8. Un parti politique préconisant l'annexion du nord du N.-B. au Québec sera formé.
9. Le Nord-Ouest du N.-B. sera annexé au Québec.
10. Le parti acadien fera élire des membres à l'Assemblée Législative de Frédéricton.
11. Un tiers parti constituera l'opposition officielle du Nouveau-Brunswick.
12. Le N.P.D. et le Parti Acadien se fusionneront.
13. Van Horne reviendra sur la scène politique au N.-B.

B. Population

14. La population des Maritimes connaîtra une importante diminution.
15. La population des Maritimes connaîtra une importante augmentation.
16. La population acadienne connaîtra une importante baisse.
17. La population acadienne connaîtra une nouvelle revanche des berceaux.
18. Les migrations deviendront plus importantes que la natalité et la mortalité comme facteurs de changements démographiques.
19. Les politiques gouvernementales favoriseront l'arrivée d'importants contingents d'immigrants en provenance du Tiers-Monde.
20. Le gouvernement du Nouveau-Brunswick instaurera son propre régime d'allocations familiales afin de favoriser la natalité.
21. Seuls le Madawaska, Restigouche et Gloucester conserveront une majorité de francophones. Le Sud-Est du Nouveau-Brunswick se sera anglicisé progressivement.
22. Les Maritimes connaîtront un retour massif de personnes ayant quitté leur province natale.
23. Au moins une agglomération importante naîtra dans la région intérieure actuellement inhabitée du N.-B.
24. Les Maritimes connaîtront une forte augmentation de la criminalité et de la violence.

C. Economie générale

25. Les Maritimes auront réussi à éliminer presque complètement leur retard économique par rapport à l'ensemble du pays.
26. Le taux de chômage au Nouveau-Brunswick atteindra le double de son niveau actuel.

27. Plus de la moitié des revenus du gouvernement du N.-B. proviendront du gouvernement fédéral.
28. Le Nouveau-Brunswick sera parmi les premières provinces à passer une loi rendant obligatoire l'indexation des salaires à un indice du coût de la vie.
29. Le Nouveau-Brunswick connaîtra une pénurie de médecins qui atteindra un état de crise.
30. Les Maritimes seront témoins de conflits ouvriers violents et prolongés impliquant de grosses multinationales.
31. Le nouveau-Brunswick connaîtra une pénurie de main-d'oeuvre non-spécialisée et devra recourir à l'immigration.

D. Agriculture

32. Le Nouveau-Brunswick connaîtra un véritable mouvement de retour à la terre.
33. Le Nouveau-Brunswick sera considéré comme l'une des provinces agricoles du Canada.
34. Les agriculteurs francophones se constitueront en une union de producteurs agricoles semblables à l'U.P.A. québécoise.
35. La culture de la patate perdra beaucoup de son importance actuelle dans la vallée supérieure du fleuve Saint-Jean.
36. Les élevages de tous genres prendront nettement le pas sur les cultures de rapport proprement dites.
37. La plus grande partie des fermes seront regroupées en entreprises coopératives.
38. La plupart des fermes appartiendront à de grosses sociétés anonymes (du genre McCain).
39. On pourra compter plus de 100 gros éleveurs de moutons dans le Nord du Nouveau-Brunswick.
40. On ne comptera plus que 3 ou 4 laiteries dans tout le Nouveau-Brunswick.

41. On verra apparaître de nombreuses fermes se spécialisant dans l'élevage d'animaux de boucherie actuellement peu populaires comme le cheval et le lapin.
42. L'élevage des animaux à fourrure connaîtra un regain extraordinaire.
43. La fabrication des produits de l'érable sera centralisée dans un très petit nombre de grandes sucreries modernes et automatisées où l'eau d'érable sera acheminée par camions-citernes.
44. Une loi interdira l'achat d'un terrain désigné comme terre agricole à moins que le nouveau propriétaire s'engage à la cultiver activement.

E. Mer

45. L'importance économique de la pêche au Nouveau-Brunswick va diminuer considérablement puis se stabiliser.
46. L'importance économique de la pêche au Nouveau-Brunswick va augmenter considérablement puis se stabiliser.
47. La plus grande partie des poissons et autres fruits de mer mis sur le marché proviendra de véritables élevages marins contrôlés par des méthodes scientifiques (aquiculture).
48. L'exploitation de diverses plantes marines deviendra une industrie importante sur les côtes.
49. La surexploitation des forêts du Nouveau-Brunswick amènera un déclin significatif de l'industrie forestière dans cette province.
50. L'importance relative des grandes compagnies forestières (Fraser, Irving, C.I.P., etc.) diminuera considérablement par rapport à l'ensemble du secteur forestier.
51. De nombreuses petites entreprises manufacturant de petits objets de bois feront leur apparition un peu partout dans les petits centres.
52. Une société de la couronne sera formée pour exploiter les forêts domaniales.

53. Des chercheurs des Maritimes trouveront un moyen de contrôler les méfaits de la tordeuse d'épinette.

G. Mines

54. On assistera à la fermeture complète des mines de charbon de la Nouvelle-Ecosse.
55. L'industrie minière du Nouveau-Brunswick dépassera largement l'industrie forestière par son importance économique.

H. Industries de transformation

56. La Nouvelle-Ecosse connaîtra une expansion extraordinaire de son industrie sidérurgique.
57. Certaines usines de pâtes et papiers du Nouveau-Brunswick devront fermer définitivement leurs portes.
58. La Nouvelle-Ecosse possèdera trois usines de production d'eau lourde.
59. Une raffinerie de pétrole sera construite dans le Nord-Est du Nouveau-Brunswick.
60. La Bricklin fermera définitivement ses portes au Nouveau-Brunswick.
61. La voiture Bricklin sera exportée en grande quantité vers la plupart des grands pays industriels.
62. La voiture Bricklin sera fabriquée en plusieurs modèles assez différents.

I. Energie

63. Le projet d'usine marémotrice sur la Baie de Fundy sera réalisé.
64. La construction de barrages hydroélectriques sera interdite au Nouveau-Brunswick.
65. Le projet de barrage de la Rivière Verte sera réalisé.

66. Une deuxième centrale nucléaire sera construite au Nouveau-Brunswick.
67. "Les pétroles Irving" seront intégrés à une grande multinationale et les enseignes Irving seront remplacées par celles de la compagnie acheteuse.

J. Transport et Communication

68. L'Ile-du-Prince-Edouard sera reliée par route au Nouveau-Brunswick.
69. La Trans-Canadienne deviendra une autoroute à voies divisées sur l'ensemble de son parcours au Nouveau-Brunswick.
70. La "Route de l'Acadie" entre Saint-Léonard et Campbellton sera complètement reconstruite en fonction des normes d'une route à haute vitesse (60 m/h).
71. La "route corridor" reliant Saint-Jean à l'axe Windsor-Lévis via le Maine verra le jour.
72. Une autoroute sera construite pour relier directement Saint-Jean, Moncton et Halifax.
73. La route "Renous" entre Grand-Sault et Newcastle sera complètement asphaltée.
74. La compagnie de transport par autobus et autocars S.M.T. sera nationalisée.
75. Un service de train-voyageur sera organisé afin de relier Edmundston et Bathurst.
76. Au moins une grande ville des Maritimes construira un système de transport urbain sur rail (genre métro).
77. Des liaisons aériennes quotidiennes existeront entre toutes les grandes villes ("cities") du Nouveau-Brunswick.
78. Des hydroglisseurs géants relieront Terre-Neuve aux Maritimes.
79. Une voie ferrée lourde sera construite entre Edmundston et Rivière-du-Loup.

80. Saint-Jean établira définitivement la suprématie de son port de mer sur celui de Halifax.
81. Une liaison maritime directe entre le détroit de Northumberland et la baie de Fundy sera réalisée par la construction du Canal de Chignecto.
82. La N.-B. Tel. sera nationalisée.
83. Le Nouveau-Brunswick en entier sera desservi par un réseau de télévision francophone.

K. Urbanisation

84. L'accroissement de la population des grandes villes du Nouveau-Brunswick va s'arrêter et dans plusieurs cas on connaîtra même des diminutions.
85. Moncton rattrapera Saint-Jean du point de vue de la population.
86. Les petits centres connaîtront un regain de vitalité par suite d'un important retour de population vers ceux-ci.
87. Saint-Jean deviendra la plus grande ville de l'Atlantique.
88. Le budget des gouvernements municipaux proviendra totalement du gouvernement provincial comme c'est le cas actuellement des conseils scolaires.
89. La préfabrication aura presque totalement remplacé la construction traditionnelle en ce qui concerne les maisons résidentielles à un ou deux logements.
90. Près du tiers de la population de Frédéricton sera francophone.
91. Près du tiers de la population de Saint-Jean sera francophone.

L. Education

92. Toutes les institutions d'éducation seront sous le contrôle direct du ministère de l'éducation, de la maternelle à l'université.

93. Le Nouveau-Brunswick aura deux ministères de l'éducation complètement indépendants l'un francophone et l'autre anglophone.
94. L'école maternelle deviendra obligatoire pour tous les enfants à partir de quatre ans.
95. L'enseignement des "métiers" se fera uniquement dans les écoles polyvalentes.
96. L'éducation universitaire sera gratuite pour tous les résidents des Maritimes.
97. Tout l'enseignement universitaire de langue française sera centralisé à Moncton.
98. L'actuelle Université de Moncton offrira un programme de doctorat en psychologie.
99. Il existera une faculté de droit francophone au Nouveau-Brunswick.
100. Des problèmes de recrutement forceront l'Université de Moncton à devenir officiellement bilingue.
101. Un centre d'études océanographiques verra le jour au Nouveau-Brunswick (peut-être au Collège de Bathurst).

M. Sports et Loisirs

102. Un ministère des sports et loisirs sera créé.
103. La chasse au chevreuil sera définitivement interdite.
104. L'une des villes des Maritimes possèdera une équipe dans la Ligue Canadienne de Football.
105. L'une des villes des Maritimes possèdera une équipe de hockey dans l'Association Mondiale.
106. Le centre du Nouveau-Brunswick deviendra un immense parc de nature aménagé pour la conservation, l'éducation et la pratique de certains sports ayant un impact écologique limité comme le camping, le ski de fond, la marche en forêt, l'équitation, le canotage, etc.
107. Un réseau de routes pour la bicyclette sera construit

dans tout le Nouveau-Brunswick.

108. Une troupe de théâtre professionnelle ou semi-professionnelle francophone sera fondée pour faire pendant à l'actuelle troupe anglophone de Frédéricton.

N. Culture

109. Les Indiens du Nouveau-Brunswick useront de violence pour revendiquer certains droits.
110. Un prestigieux centre culturel (ou "place des arts") ayant comme objectif de promouvoir la culture française dans les Maritimes sera construit à Moncton.
111. Un déchaînement de violence éclatera à Moncton entre francophones et anglophones.
112. Un deuxième quotidien de langue française verra le jour et survivra au Nouveau-Brunswick.
113. La Société des Acadiens du Nouveau-Brunswick (S.A.N.-B.) sera supplanté par un mouvement beaucoup plus radical.

O. La Marévie (Région française de Madawaska, Grand-Sault et Restigouche-Ouest)

114. La Marévie jouera le rôle de leader dans la lutte pour le français au Nouveau-Brunswick.
115. Le nombre d'étudiants réguliers au Collège Saint-Louis-Maillet dépassera les six cents.
116. Le Collège Saint-Louis-Maillet ne donnera plus que des cours de première et deuxième années dans les programmes universitaires réguliers.
117. Le port de mer en eaux profondes sera construit à Gros-Cacouna, ce qui affectera bénéfiquement l'économie marévienne.
118. La population marévienne atteindra une fois et demie son niveau actuel.
119. L'aéroport de Saint-Léonard sera réalisé.

120. Le journal Le Madawaska cessera d'être publié.
121. Edmundston possèdera son propre poste de télévision qui remplacera CJBR sur le canal 13.
122. Un retransmetteur de Radio-Canada construit du côté ouest de Grand-Sault permettra à toute la Marévie de capter les émission du réseau national.
123. On discutera sérieusement de l'indépendance de la "République".

APPENDIX IILIST OF PREVISIONAL STATEMENTS

(TRANSLATED FROM THE FRENCH)

A. Politics and Territory

1. The Maritime Provinces will form a political union.
2. Charlottetown will become the capital of the Maritime Union.
3. Moncton will become the capital of the Maritime Union.
4. Halifax will become the capital of the Maritime Union.
5. Newfoundland and Labrador will seriously discuss with the Maritime Provinces the possibility of forming a political union of the four Atlantic provinces.
6. Magdalen Islands will become part of one of the Maritime provinces.
7. For administrative purposes, New Brunswick will be divided in two parts: the Southern or anglophone half and the Northern or francophone half.
8. A political party promoting the unification of Northern New Brunswick to Quebec will be formed.
9. The North-West region of New Brunswick will become a part of Quebec.
10. The Acadian Party will have some members elected in the Legislative Assembly in Fredericton.
11. What is now a third party will form the official opposition in New Brunswick.
12. The N.D.P. and Acadian Party will merge (in N.B.).
13. Van Horne will make a come back on the New Brunswick political scene.

B. Population

14. An important population decrease will occur in the Maritimes.
15. An important population increase will occur in the Maritimes.
16. The Acadian population will significantly decrease.
17. The Acadian population will go through a new "revenge of cradle" phase.
18. Migrations will become more important than birth and death rates as factors of demographic change.
19. Governmental policies will foster immigration of large numbers of people from the Third World.
20. The government of N.B. will set up its own family allowance program in order to increase birth rate.
21. South-East New Brunswick will have been progressively anglisized and only Madawaska, Restigouche and Gloucester counties will still number a majority of francophones.
22. A massive return of Maritimers living outside their native province will be witnessed.
23. At least one large community will spring up in the presently unpopulated central region of New Brunswick.
24. A significant increase of criminality and violence will be recorded in the Maritimes.

C. General Economy

25. The relative economic lag of the Maritimes behind the rest of the nation will have been reduced to practically nil.
26. Unemployment rate in New Brunswick will double its present level.
27. More than half of the New Brunswick government revenue will be provided by federal government sources.

28. New Brunswick will be among the very first provinces to legally require that salaries be coupled to a cost of living index.
29. New Brunswick will face a critical shortage of physicians.
30. Long and violent labour conflicts involving large multi-national corporations will be witnessed in the Maritimes.
31. New Brunswick will experience a shortage of unskilled labour forcing the province to rely upon immigration to fulfill this need.

D. Agriculture

32. A strong "back to the countryside" movement of population will occur in New Brunswick.
33. New Brunswick will come to be known as one of the Canadian provinces specialized in agriculture.
34. French-speaking farmers will create a union of agricultural producers similar to Quebec's U.P.A.
35. Potato farming will lose its preponderance as a crop in the upper Saint-John River valley.
36. Animal rearing farms will be much more important than cash crop farms.
37. Most farms will join coop enterprises.
38. Most farms will belong to large joint-stock companies (such as McCain).
39. More than 100 large sheep raising farmers will operate in Northern New Brunswick.
40. There will be only three or four dairies left in all New Brunswick.
41. Many specialized farms will appear where animals like horses and rabbits, which are not at the moment very popular slaughter animals, will be raised.
42. Fur farming will make an extraordinary comeback.

43. Fabrication of maple sugar products will be centralized in a small number of large modern and automated processing plants where sap will be brought in by tanker trucks.
44. A law will forbid selling land designated as farm land unless the new owner intends to actively farm it.

E. The Sea

45. The economic importance of fishing in New Brunswick will considerably diminish and then stabilize.
46. The economic importance of fishing in New Brunswick will considerably rise and then stabilize.
47. Most fish and other sea food on the market will come from sea farming operations using scientific methods (aquaculture).
48. Exploitation of a variety of marine plants will form the basis of an important coastal industry.

F. The Forest

49. Overexploitation of forests in New Brunswick will bring about a significant decline of the forest industry in that province.
50. The relative importance of the larger forest companies (Fraser, Irving, C.I.P., etc.) will considerably diminish when compared with the whole of the forest sector.
51. Numerous small factories producing small wooden items will appear in small communities.
52. A crown corporation will be created for the purpose of exploiting crown forests.
53. Maritime researchers will find a solution to the damaging of spruce trees by bud worms.

G. Mining

- 54. All coal mines in Nova Scotia will be closed down.
- 55. In New Brunswick, mining will become economically much more important than forestry.

H. Manufacturing

- 56. In Nova Scotia, an extraordinary expansion of the steel industry will occur.
- 57. Some New Brunswick pulp and paper mills will shut down forever.
- 58. There will be three heavy water plants in Nova Scotia.
- 59. An oil refinery will be built in North-East New Brunswick.
- 60. Bricklin will definitively shut up shop in New Brunswick.
- 61. Bricklin cars will be exported in large numbers towards most of the major industrialized countries.
- 62. Bricklin cars will be manufactured in many different models.

I. Energy

- 63. The project of a tidal power plant in the Bay of Fundy will become a reality.
- 64. Construction of hydro-electric power dams will be banned in New Brunswick.
- 65. The Green River dam project will become a reality.
- 66. A second nuclear power plant will be built in New Brunswick.
- 67. Irving Oil will be integrated to a major multi-national company and Irving signs will make place for those of the new proprietors.

J. Transportation and Communication

68. Prince Edward Island will be linked by highway to New Brunswick.
69. The Trans-Canada highway will become a divided highway along its full New Brunswick route.
70. The "Acadian Trail" between St-Léonard and Campbellton will be completely rebuilt in accordance with high speed highway standards (60 mph).
71. A "corridor highway" linking St. John to the Windsor-Lévis axis via the State of Maine will be built.
72. A freeway linking St. John, Moncton and Halifax will be built.
73. The "Renous" route linking Grand Falls and Newcastle will be completely paved.
74. S.M.T. bus and coach company will be nationalized.
75. A passenger train service between Edmundston and Bathurst will be set up.
76. At least one Maritime city will develop a metropolitan rapid transit system on rail.
77. Daily flights will exist between every city of the Maritimes.
78. Giant hovercrafts will link Newfoundland to the Maritimes.
79. A heavy gauge railway will be built between Edmundston and Rivière-du-Loup.
80. St. John will definitively establish its supremacy over Halifax as a sea port.
81. A direct maritime link between Northumberland Strait and the Bay of Fundy will be created by the construction of the Chignecto Canal.
82. N.B. Tel will be nationalized.
83. The whole territory of New Brunswick will be covered by a French television network.

K. Urbanization

84. Population growth of New Brunswick cities will come to a stop and in many cases a decline will even be experienced.
85. The population of Moncton will become as large as that of St. John.
86. Smaller centers will experience a new vitality as population begins to flow back from larger centers.
87. St. John will become the largest city of the Atlantic Region.
88. Municipal governments will be totally financed by the provincial government as it is now the case with school districts.
89. Prefabrication techniques will almost totally replace traditional construction methods as far as single and two family dwellings are concerned.
90. Approximately one third of the population of Fredericton will be francophone.
91. Approximately one third of St. John's population will be francophone.

L. Education

92. All educational institutions will be directly controlled by the Department of Education from the kindergarten to the university level.
93. There will be two completely independent departments of education in New Brunswick: one English and one French.
94. Attending kindergarten will be compulsory for every child from the age of four.
95. The teaching of trades will be fully integrated into the senior high school system.
96. University education will be tuition free for all Maritime residents.
97. University level education in the French language will be centralized in Moncton.
98. Université de Moncton will develop a Ph.D. program in psychology.
99. There will be a French law school in New Brunswick.
100. Enrolment difficulties will force Université de Moncton into becoming officially bilingual.
101. An ocean study centre will be developed in New Brunswick (possibly at Collège de Bathurst).

M. Sports and Leisure

102. A ministry of sports and leisure will be created.
103. Deer hunting will be definitively prohibited.
104. One of the Maritime cities will have its own team in the Canadian Football League.
105. One of the Maritime cities will have its own team in the World Hockey Association.
106. A huge nature park will be developed in central New Brunswick for purposes of conservation, education and participation in sports having limited ecological im-

pact such as camping, cross-country skiing, hiking, horse-riding, canoeing, etc.

- 107. A province wide network of bicycle trails will be established in New Brunswick.
- 108. A professional or semi-professional French theatre company will counterpart the present English company now based in Fredericton.

N. Culture

- 109. New Brunswick Indians will use violence in claiming certain rights.
- 110. A prestigious cultural centre (place des arts) dedicated to the promotion of French culture in the Maritimes will be built in Moncton.
- 111. Moncton will be the scene of violent outbursts opposing anglophones and francophones.
- 112. A second French daily will be published which will survive in New Brunswick.
- 113. The Société des Acadiens du Nouveau-Brunswick will make way to a much more radical movement.

O. The Marévie (The French region of Madawaska, Grand Falls and Restigouche West)

- 114. The Marévie will play the leading role in the battle for the recognition of the French reality in New Brunswick.
- 115. Enrolment of full time students at Collège Saint-Louis-Maillet will break the 600 mark.
- 116. Collège-Saint-Louis-Maillet will offer but first and second year courses in regular academic programs.
- 117. A deep sea port will be built at Gros Cacouna which will benefit the Marevian economy.
- 118. The Marevian population will reach one and one half its present size.

119. The St-Leonard regional airport will be a reality.
120. Le Madawaska will cease publication.
121. A T.V. station based in Edmundston will replace CJBR on channel 13.
122. A CBC transmitter located West of Grand Falls will make the French national network present in the whole Marévie.
123. Independance of the "Republic" will be seriously discussed.

APPENDIX IIIINSTRUCTIONS (FIRST QUESTIONNAIRE)

SONDAGE SUR LE FUTUR DES MARITIMES

Les énoncés qui suivent identifient des changements qui pourraient se produire dans les Maritimes au cours des prochaines années. Ce sondage cherche à déterminer comment les francophones du Nord-Ouest du Nouveau-Brunswick perçoivent le futur de leur province et des Maritimes en général.

Votre tâche consiste à évaluer chacun des énoncés selon trois échelles distinctes. La première concerne votre perception de la probabilité que le changement énoncé se réalisera ou non. Par exemple, si vous croyez que le changement énoncé a de fortes chances (91 à 100%) de se réaliser et par conséquent se réalisera très probablement, vous devez cocher à l'endroit approprié sous la colonne 4. Si vous croyez que le changement énoncé a de bonnes chances (71 à 90%) de se réaliser, vous devez cocher sous la colonne 3, et ainsi de suite.

La deuxième échelle concerne la date approximative où vous croyez que le changement pourrait se réaliser. Par exemple, si vous pensez que le changement énoncé pourrait se réaliser entre 1991 et 2000, c'est-à-dire dans une vingtaine d'années, vous devez cocher la colonne 3 de cette échelle, et ainsi de suite.

La dernière échelle concerne l'attitude que la population concernée par le changement pourrait avoir si le changement se réalisait. Par exemple, si vous croyez que la population serait fortement opposée au changement énoncé, vous devez cocher la colonne 0 de cette échelle, et ainsi de suite.

Ce questionnaire n'est pas un test. Toutes les réponses sont bonnes et la meilleure est encore celle qui correspond le plus fidèlement à votre opinion personnelle.

Chacun des énoncés s'applique à l'ensemble des trois provinces Maritimes à moins qu'il n'en soit spécifié autrement dans l'énoncé.

Vous pouvez utiliser l'espace libre à droite pour inscrire des commentaires si vous le désirez.

Merci de votre collaboration!

APPENDIX IV

RESPONSE FORM SAMPLE (FIRST QUESTIONNAIRE)

| | PROBABILITE | DATE | ATTITUDE DE LA POP. CONCERNEE |
|-----|---|--|---|
| | 4 91-100% (se réalisera très probablement) | 4 d'ici cinq ans (avant 1980) | 4 fortement favorable |
| | 3 71-90% (se réalisera probablement) | 3 dans une dizaine d'années (entre 1981 et 1990) | 3 généralement favorable |
| | 2 31-70% (difficile à prédire) | 2 dans une vingtaine d'années (1991-2000) | 2 généralement indécise, indifférente, partagée |
| | 1 11-30% (ne se réalisera probablement pas) | 1 après 2000 | 1 généralement opposée |
| | 0 1-10% (ne se réalisera très probablement pas) | 0 probablement jamais ou pas avant cinquante ans | 0 fortement opposée |
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APPENDIX V

INSTRUCTIONS (SECOND QUESTIONNAIRE)

SONDAGE SUR LE FUTUR DES MARITIMES

RECHERCHE D'UN CONSENSUS

Ce sondage sur le futur des Maritimes s'est avéré jusqu'à présent un immense succès et votre participation y a certainement été pour quelque chose. Trente-huit personnes ont répondu au questionnaire de base.

Vous avez maintenant en main la liste des énoncés proposés, votre feuille de réponses déjà remplie, de même qu'une nouvelle feuille de réponse où nous avons indiqué les résultats de la première étape du sondage. Il se peut que vous soyez surpris (e), déçu (e), frustré (e) d'apprendre comment pensent la majorité de ceux qui ont participé à l'enquête.

Nous aimerions maintenant connaître comment vous réagissez à ces résultats, en cochant l'une des deux colonnes prévues à cette fin. Par exemple, si vous croyez que l'opinion de la majorité est acceptable et que vous êtes généralement d'accord avec elle, vous devez cocher la colonne X. Il ne s'agit pas ici d'être parfaitement d'accord avec la majorité, mais uniquement d'exprimer si vous croyez cette opinion valable.

Au contraire, si vous êtes fortement en désaccord avec l'opinion de la majorité, vous devez cocher la colonne Y. Dans ce cas, veuillez indiquer où se situerait maintenant votre réponse dans les trois premières échelles. (Bien entendu, votre réponse peut avoir varié depuis le début de cette étude et c'est tout à fait normal.)

La dernière échelle concerne la désirabilité du changement énoncé. Si vous croyez que le changement énoncé, à votre point de vue, est fortement désirable, vous devez cocher la colonne 4 de cette échelle. Si vous croyez que le changement énoncé est désirable bien qu'il ne soit pas fortement désirable, vous devez cocher la colonne 3 et ainsi de suite.

Encore une fois, un grand merci pour votre collaboration. Nous apprécions beaucoup recevoir vos commentaires sur cette étude. Vous pouvez pour ce faire utiliser le verso des feuilles de réponse.

APPENDIX VI

RESPONSE FORM SAMPLE (SECOND QUESTIONNAIRE)

| | PROBABILITE | DATE | ATTITUDE DE LA POP. CONCERNEE | ACCORD | DESIRABILITE |
|------|---|--|---|---|---|
| | 4 91-100% (se réalisera très probablement) | 4 d'ici cinq ans (avant 1990) | 4 fortement favorable | X Je suis généralement d'accord avec la majorité | 4 fortement désirable |
| | 3 71-90% (se réalisera probablement) | 3 dans une dizaine d'années (entre 1991 et 1999) | 3 généralement favorable | Y Je suis fortement en désaccord avec la majorité | 3 désirable, mais non fortement désirable |
| | 2 31-70% (difficile à prédire) | 2 dans une vingtaine d'années (1991-2000) | 2 généralement indécise, indifférente, partagée | | 2 ni désirable, ni indésirable |
| | 1 11-30% (ne se réalisera probablement pas) | 1 après 2000 | 1 généralement opposée | | 1 indésirable, mais non fortement indésirable |
| | 0 1-10% (ne se réalisera très probablement pas) | 0 probablement jamais ou pas avant cinquante ans | 0 fortement opposée | | 0 fortement indésirable |
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RECREATION GEOGRAPHY AND THE FRENCH
SCHOOL OF GEOGRAPHY: A REVIEW

by

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AN EXTENDED ESSAY SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
in the Department
of
Geography



ADRIEN BÉRUBÉ 1975

SIMON FRASER UNIVERSITY

October 1975

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ABSTRACT

This essay suggests that North American recreation geographers would greatly benefit from a better knowledge of the works of French-speaking recreation geographers. To this end, the study introduces the French geographical literature on recreation and tourism to an English-speaking audience.

The study of recreation and tourism is shown to be an old and fundamental concern of the French school of geography. French scholars quickly realized that leisure would become a mass phenomenon with tremendous economic and cultural implications, thereby giving an edge to recreation research in France.

The paper demonstrates that French recreation geography shares with French geography as a whole the same basic characteristics. It is essentially descriptive, holistic, and regional. Nevertheless, concepts and typologies which are fundamental to a science of recreation have been elegantly defined, and a most interesting methodological contribution has been the development of "consumption indices" with which the impact of tourism is measured.

Regionally, the emphasis of French recreation

geography has been on alpine, coastal and urban tourist regions in France and Western Europe. Thematically, French geographers pioneered research on winter sports, recreational housing, urban recreation hinterlands, etc.

French recreation geography is also very problem-oriented. Planning studies, although recognizing the value of recreation as a means of economic development, have been keenly aware of its costs and drawbacks. Other significant trends of French recreation research include an uncommon predilection for elaborate and beautiful cartography and a recently developed interest for North American concepts and models which are reinterpreted and integrated in the mainstream of French traditions rather than blindly copied.

Finally, the essay posits that the particularities of French recreation geography relative to its North American counterpart stem not only from differences in geographical traditions but also from differences between Western European and North American recreation behaviors. The French emphasis on tourism as a migration and the North American accent on outdoor recreation are typical in this respect. The conclusion encapsulates in a few generalizations the essence of these particularities and constitutes a plea for a broader professional dialogue between French and North American recreation geographers.

A problem that ought not to exist among English-speaking scholars and scientists but most definitely does is that of linguistic parochialism. It is particularly virulent in our own field.

Roy I. Wolfe

ACKNOWLEDGMENT

This essay reflects contributions from many persons. The author wishes to thank in particular Dr. R.C. Brown who supervised this work, Dr. T.K. Peucker whose stimulus and European experience have been priceless, and the following reviewers for their constructive comments on earlier drafts and encouragement to follow through: Dr. R.B. Horsfall, Simon Fraser University; Dr. R.I. Wolfe, York University; and Dr. Serge Lavoie, Université de Montréal.

The author is also grateful to Mr. Pierre-O. Courtemanche and the staff of Le Centre d'Etudes du Tourisme, Université de Montréal, for the use of their library and facilities and for their help in providing many important documents, to Ms. Florine Thériault who ironed out many linguistic shortcomings in the manuscript, and to Ms. Lucie Nadeau and Ms. Rachel Bélanger who respectively typed the essay proper and the appended bibliography.

Finally, the author is deeply indebted to his family and especially his wife, Constance Martin-Bérubé, for the toll exacted by extended leaves of absence totalizing sixteen months of separation.

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INTRODUCTION

North American geography has been largely built upon German foundations. Many ground breakers of the American school such as Louis Agassiz, Arnold Guyot, William Morris Davis and Ellen Churchill Semple either studied or taught in Germany at one time or another during their careers.¹ The interpretations of the German masters by Sauer (1925) and Hartshorne (1939 and 1961) have set the standards for two generations of geographers on this continent. A recent reappraisal of Kantian geography (May, 1970) demonstrates how pervasive the influence of this philosopher has been on contemporary thought. Von Thünen, Weber, Lösch, Christaller, also constitute names inseparable from the theoretical constructs of the so-called "new geography".

To be sure, the contributions of other national schools of geography have generally been acknowledged. Three major histories of geographical thought published in the United States during the last ten years (Dickinson, 1969; Fischer, Campbell and Miller, 1967 and James, 1972)

¹Most biographical notes about these forerunners of the American school can generally be traced to one of the following works: Agassiz (1885), Hooker (1893), Baulig (1950), Bryan (1935) and Colby (1933). A more recent biography of Louis Agassiz is Lurie (1960).

emphasize the role played by French, British, and other non-German geographers in the development of the field. Harris (1962) surveyed the "accomplishments and tasks" of Soviet geography. Similarly, Buttimer's famous monograph (1971) constitutes "a tribute to the creative artist of France's humanistic tradition in social science and a plea for aggiornamento within the geographic noösphère (p. vii).

Still, there is considerable reason to believe that North American geographers to-day are by and large ignorant of what their colleagues outside the Anglo-Saxon cultural realm are doing. In particular, familiarity with the French school leaves much to be desired. For instance, Warntz and Wolff (1971) have failed to recognize in their Breakthroughs in Geography any "breakthroughs" accomplished by French geographers--unless Guyot is assimilated to the French school. Similarly, the treatment of French geography in Fuson (1969) appears to stand on the naïve side (see in particular p. 108).

Of course, barriers to communication are numerous and obvious and need not be discussed here. Even within the "Western World", the International Geographical Union itself has had damping effects on scientific intercourse (see Boesch, 1972). Claval, speaking of rural settlement geography, has argued that " . . . the maintenance of two

official languages at the I.G.U. has allowed two cultural communities to meet while ignoring each other" (p. 140).¹

Purpose of the Study

At a time when the relevance and benefits of the "quantitative revolution" and nomothetical approach are currently being seriously reassessed by North American geographers, efforts to introduce some cross-cultural fertilization in the field are likely to be useful and welcome. This essay constitutes such an endeavour. Its purpose is to present in the English language the work of French-speaking geographers in the field of outdoor recreation and tourism. Whereas Anglo-American sociologists concerned with the study of leisure have been exposed to excellent translations of Caillois (1959, 1961), Dumazedier (v.g. 1967), Friedmann (1964) etc., it seems that names like Cribier, Ginier, Boyer, Defert and so on are still virtually meaningless on this continent, even among recreation geographers.² This paper is a contribution towards filling this gap.

¹For the convenience of the reader all quotations from French sources have been translated in English by this writer.

²A noteworthy exception is R.I. Wolfe whose review of Cribier, La Grande Migration d'Eté des Citadins en France, (Wolfe, 1971) provided the spark which inspired the present study.

More specifically the study seeks four main objectives:

1. To show the place of recreation and tourism as a research interest in French geography;
2. To sketch the cultural and institutional setting in which French authors operate;
3. Most important, to examine the basic paradigms and methodologies of French recreation studies;
4. And finally, to outline the evolution of research frontiers in the French geography of recreation and tourism.

Scope and Limitations of the Study

To provide a realistic account of the French geography of recreation and tourism is a task plagued with many pitfalls. A number of difficulties stem from European canons of scholarship. For instance, it is rather time consuming to trace the history of an idea. French authors often do not perceive the need to relate their studies to previous research in their field and thus they seldom adequately list their references. Bibliographies--when present--are generally sketchy, and recent contributions by colleagues tend to be ignored. Similarly, attempts to critically survey and integrate contemporary ideas on specific issues by means of the review article format, so popular in North American journals, constitute the exception rather than the rule among their French counterparts.

On the other hand, scientific literature in foreign languages is not always widely circulated in North America. Thus a number of potentially interesting articles have not been considered in this review simply because they appeared in sources unavailable to this writer. Likewise many mimeographed papers and unpublished theses could not be given the firsthand attention they probably deserved. It is interesting to note that the high costs of publishing coupled with a rather limited market for scholarly works have resulted in a scarcity of "medium-size" publications in France. Paperback publishers tend to specialize in more popular productions. Yet, "brick-size" doctoral dissertations are frequently published thanks to generous grants from a number of government agencies (see Musset, 1957). But the bulk of the material reviewed here is formed of article-length papers that have appeared in the better known geographical journals (see Appendix I).

Therefore this paper is mainly concerned with the French academic publications generally available on this continent. With few exceptions, no consideration is given to government documents and reports prepared by private research teams nor to articles in popular magazines and newspapers.

Secondly, although the focus is essentially on

material written by French geographers, some studies produced by other French authors with backgrounds in history, economy, sociology, etc. have been included in this review when they appeared to be closely related to the body of geographical literature proper.

Finally, the expression "French geographers" in the context of this essay is not used strictly in a national sense, but rather means all geographers writing in the French language. Therefore the phrase is deemed to include those Quebecers, Belgians, North Africans, etc. whose education and style owe more to the French than to any other national school of geography. Conversely, works published in languages other than French by geographers of the French school have been ignored.

EARLY STUDIES

The relationship between French geography and tourism is an old and well established one. Indeed, it has been argued that as a scholarly discipline, modern geography originated in part from the necessity to treat more systematically the information about alien lands brought back by explorers and adventurers of former days (Claval, 1964). The first periodicals in human geography were often nothing more than collections of popular travelling accounts. The following are translations of titles of articles which appeared in volume IV (1881) of the serious Bulletin de la Société Languedocienne de Géographie (see Appendix II): "My Accident at Mont Blanc"; "Notes from a Naturalist aboard the Junon"; "Diary of a Trip to the French Possessions along the West Coast of Africa"; etc.

Similarly, Vidal de la Blache, first trained as a historian, is said to have developed an interest in geography while travelling in Greece, the Middle-East and elsewhere (Gallois, 1918). Chabot (1964, p. 191) submits that a geographer can be likened to a tourist who would make good use of a scientific mind and a propensity to explain what he perceives. Conversely, "the intelligent tourist is a geographer who doesn't know it" (idem).

Thus tourism was first considered by French geographers not as a social phenomenon to be studied objectively, but as an activity sharing with geography a curiosity for the character of places. This attitude is exemplified by an early monograph (Cord and Viré, 1900) which basically describes the physiography of a French department and briefly considers the "anthropology" of the study area. The authors also suggested itineraries for field trips in the region and freely combined rigorous data with practical tips. Their book is subtitled: A Guide for the Tourist, Naturalist and Archeologist.

This preoccupation for potential travellers is deeply imbedded in the writings of French geographers. It stems from a traditional desire to be useful to the public (Meynier, 1969) and no doubt from the necessity to enlarge the readership of scholarly works so as to economically justify their publication (Musset, 1957, p. 193). Part of the axiomatic success of the French regional studies can undoubtedly be attributed to this symbiotic relationship between writer and reader.

However, beginning in the 1920's, some recognition by geographers of the economic importance of tourism developed. In a study of the pastoral way of life in the French Alps, Arbos (1922) noted the double edged effect of the

development of summer resorts on a secular economy. On the positive side, the thermal springs resorts and other tourist establishments were found to provide an interesting market for local dairy products, but on the other hand, the labour supply showed signs of stress as the peasants were gradually lured away from their traditional occupations in order to work in service industries.

In 1924, Blanchard published a brief essay on the geographic aspects of tourism in the French Alps. This article appears to be the first study dealing exclusively with recreation ever done by a geographer.

Despite their perspicacity, the work of these vanguards went largely unnoticed by the profession. In 1932, Weiler deplored the lack of interest of geographers for an economic factor "that represented, in 1929, fifty five and one half billion francs in the world economy" (p. 405). He further observed that international tourists constitute both a "moral power which tends to reduce the spiritual distance separating countries . . . (and) an essential element of the balance of payments and financial prosperity of states" (p. 402). In his conclusion, Weiler prophetically outlined the role geography will play in the study of recreation:

There is no doubt that such a component of the world economy will become a study subject of economics and finance and--to the same extent--of geography. Monographs will form the basis for an integrated view of all elements of tourism: the roles played by developing agencies and governments policies; tourist transportation by sea, rail, automobile and air; the hotel industry; and finally, the creation and development of picturesque ocean and mountain resorts and their important bearing upon the economic well-being of states (p. 405).

Weiler's plea for more concern about the problems of tourism was perhaps belated for it was accompanied in the literature by a sudden proliferation of writings on recreation.¹ Statistical reports and short critical notes became a more regular feature of the major professional journals (e.g. Blache 1933). Sion (1932 and 1933) analysed the economic and psychological implications of the tourist invasion of Italy. He observed that international tourism was quickly becoming a mass phenomenon fostered by aggressive travel agents, new thinking in passenger transportation and rate structures, etc. Onde (1934) examined the meaning of the new trans-alpine highway for recreation opportunities. Albitreccia (1937) observed that tourist movements are

¹In the United States, the first recreation studies by geographers also appeared in the 1930's (MacMurray, 1930; Jones, 1933; Hedrick, 1934; Brown, 1935; Prophet, 1936; etc.). These articles were basically area studies concerned with the land uses and economic impact of recreation.

differentially impeded by custom tariffs and regulation. He calculated that Austria had to attract sixty German visitors to compensate for each Austrian who left the country for a holiday in order to even out her "touristic" balance of payment.

The economic and cultural importance of tourism was also acknowledged in other French-speaking regions of the world. A number of articles appeared in North African journals in the 1930's which showed the same geographical preoccupations as those published in France (e.g. Bugeja, 1933, de Mazières, 1934). A similar interest developed in Quebec during the Second World War as illustrated by the works of Tessier (1939, 1943).

In addition, studies dealing primarily with other aspects of geography were increasingly taking into account the leisure factor. A population study of Ajaccio (Albitreccia, 1938) claimed that "popular tourism" was responsible for the spectacular growth of the local population. A study of rural geography (Chardonnet, 1938) showed how "thermalism" and alpinism opened up and revolutionized a secluded but not unsuccessful secular agricultural economy. In a monograph on Annecy (Milon, 1939), three chapters out of four are devoted to the

physical geography of the lake. However, the fourth one, which proposes a human ecology of the riparian population, is most notable for its emphasis on the recreational function of the lake, and an interesting typology of recreationists is developed. Again, remarkable regional studies like the dissertation of Papy (1941) on the Atlantic coastal region, and the twelve volume work of Blanchard (1938-1956) on the Western Alps are in reality inseparable from the literature of recreation and tourism. Decades later, their recreational content still provides basic raw materials for modern studies.

The most systematic and ageless recreational study of the thirties is undoubtedly La vie touristique en Savoie (Miège, 1933, 1934). The history of outdoor recreation and tourism in Savoy is traced from the early days of aristocratic "alpinism" centered on Mont Blanc through to "democratic" vacationing in the 1930's when villégiature had spread to the whole region. Miège measured with precision how the origin and other characteristics of the visitors of the region evolved with time and authoritatively discussed the implantation and impact of seasonal homes in the Alps.

Perhaps a major shortcoming of the pre-war geography of recreation and tourism in France is the lack

of a general theoretical synthesis of the subject. In contrast French economists published at least three such books which are worth mentioning. One deals with tourism and the national economy (Mortier, 1942). Another examines the problem of international tourism (Trimback, 1938). The third one discusses the impact of tourism on contemporary economic conditions (Léveillé - Nizerolle, 1939).

Eventually the outbreak of hostilities in Europe and the Second World War brought about more urgent tasks and the virtual abandonment of research on recreation. With the exception of Blanchard who continued publishing his series of monographs on Alpine regions even during the war period, one must wait until 1946 for the next significant study to appear (i.e. Dalipo). Post-war studies will be examined in the following sections of the essay.

THEORETICAL CONSIDERATIONS AND RESEARCH TECHNIQUES

It can be seen so far that since its origin, French recreation geography has been strongly slanted towards the analysis of tourist movements--especially international tourists--and of their economic aspects, both on a macro (national) level and a micro (local and regional) scale. This was to be expected in a country which had traditionally "profited from an authentic tourist monopoly owing to the good repute of Paris and the Côte d'Azur" (Ginier, 1965, p.5) and where the original interest for leisure related problems came from economists (Weiler, 1932, p. 402). But in recent decades, French geographers have become more conscious of other aspects of tourism. This section briefly reviews those studies which have dealt explicitly with the epistemological, theoretical, methodological or technical aspects of a geography of recreation.

Defining Tourism

Although one can talk about a well established geography of recreation and tourism in France, until very recently few writers have attempted to specifically delineate the scope and methods of the field. Châtelain, in a short article (1949) discussed the origins, causes and forms of

the tourist "industry" and examined its world distribution and geographical consequences. In his Nouveau Précis de Géographie Humaine Derruau (1969) devoted ten pages (pp. 378 to 387) to tourism in a discussion of tertiary activities. In two landmark articles (Chabot and Pingaud, 1956 and Chabot, 1964), Chabot insisted that the "English term" recreation is more meaningful to describe the category of phenomena studied as tourism by French social scientists and proceeded to review the field. Boyer (1972) also produced an excellent introduction to tourism. Still, a genuine geography of tourism has yet to appear in the French language, although one is now forthcoming (Barbier and Cazes). Nevertheless, good scholarship has always required that writers discuss their definitions and methods so that many monographs in the sixties included elaborate theoretical considerations (e.g. Barbaza, 1966).

Of particular interest here is a look at what is understood as tourism in the French tradition. In Anglo-America the terms tourism and tourist are used rather limitatively. They commonly connote the idea of a feat (travelling long distances to far away places, taking long vacations, spending lots of money, etc.). As a consequence to be a tourist is to be a stranger, with all that entails. In the literature the words tourist and tourism are avoided when possible. Instead, distinctions are drawn between recreationists, vacationists and recreational vacationists

(as in Campbell, 1967) and efforts are made to determine when an outing becomes a trip and a trip a vacation (Ferris, 1962, chapter 7).¹

Tourism also tends to be regarded in Anglo-America more as a branch of industry (i.e. the travel industry) than as a contemporary cultural phenomenon (Courtemanche, 1967). In this light the tourist is primarily seen as a consumer and client. His or her reasons for travelling, whether strictly for pleasure or not become secondary. It follows that recreation--especially outdoor recreation--and tourism are dichotomized (e.g. Arthur D. Little, Tourism and Recreation, 1967).

This distinction between tourism and recreation barely exists in the so-called French géographie du tourisme. The assertion that "while European geographers seem to have placed emphasis upon tourism, no such direction has appeared on the American scene" (Lancaster and Nicholls, 1971, p. 3) is therefore misleading. The concept of tourism in the

¹Such operational definitions introduce the time dimension into tourism and have led to "Byzantine" intellectual battles everywhere. The French national statistical agency I.N.S.E.E. has modified its operational definition of a tourist a number of times over the years, thereby further complicating statistical comparisons. The Swiss economist Krapf has been a leading expert in discussions of this kind (e.g. Krapf, 1948).

French literature is at once more comprehensive and better articulated.

For one thing, the distance travelled by the tourist is unimportant. The word "connotes a circular movement around the Bois de Boulogne as well as around the World" (Ginier, 1969, p. 25). Furthermore,

The word tourism stands not only for a movement of people travelling for pleasure, but also for a set of relationships and realities resulting from the stay in a place of outsiders who do not settle or engage in a lucrative activity there.¹ A quick analysis shows that tourism implies a move of sojourn of a person outside his or her usual domicile or residence. This move or sojourn, motivated by a consumptive activity, must be temporary and suggested by the pursuit of a personal amenity, such as entertainment, relaxation, or lore (ibid.).

Derruau (1969) has clearly pointed out that "there is tourism whenever recreation creates movements out of the locality of residence or away from its immediate surroundings" (p. 379). Hence, tourism thus conceived encompasses indoor as well as outdoor recreational activities occurring away from home. Therefore French recreation geography is not focussed on a more narrow subject than its American counterpart. Indeed the French is broader as will be evidenced in this and

¹Taken literally however, this definition would tend to exclude lucky casino players and racetrack stakers (if any . . .). This is not the case.

the following sections.

The view of tourism as a migration, that is as a movement of people from one place to another, entails a number of important implications. First the geographic character of recreation studies is solidified. Tourism can be seen as both product and a genetic factor of geography. For one writer, "the geographical fact of tourism conforms to a complex structure which is the result of a convergence of multifarious elements of the physical, human and economic geography and of the history . . . of places" (Ginier, 1965, p. 2). For another, tourism "on one hand, moves the crowds for their pleasure, and on the other, it creates jobs and substructures; spontaneously or by decisions of public authorities, it transforms the geography of numerous countries" (Derruau, 1969, p. 378). Cribier (1969) claims that the holiday movements of twenty million French citizens which she has studied in an authoritative dissertation constitute "a profoundly geographical phenomenon, in the sense that the relationships between man and space are directly involved: the population distribution of France is seasonally modified, while the land uses and landscapes of vacationing regions are permanently transformed" (p. 5). French Canadian geographers have also stated the geographical holism of tourism as an object of enquiry (especially Lapierre, 1959 and Brière, 1961).

Similarly, French geographers generally avoid probing into aspects of recreational behavior that cannot be directly treated as migratory phenomena. The meaning of the recreational experience for the recreationist, the desire to "get away from it all", the appetite for new vistas, and "leisure without movement" (i.e. home based recreation) are matters left to be investigated by psychologists and sociologists (Chabot, 1964, p. 192).

Considering tourism as a migration also provides a meaningful typology of the main problem areas investigated by French recreation geographers, namely the study of:

1. the consequences of the recreational exodus in areas vacated by tourists;
2. the effect of the tourist invasion in hosting zones;
3. the impact of tourism along the paths linking major departure and destination points; and
4. the nature and volume of tourist flows.

Measuring Tourism

These research interests will be discussed further

in subsequent sections. However, it is appropriate to dwell immediately on those studies mainly concerned with ways of measuring tourism, or what Defert (1955) has called tourismometrics.

Barbaza (1966) observed that "it is even more difficult to measure tourism than it is to define it" (p.574). When they are not totally lacking, official statistics on the volume and nature of tourist flows, on the socio-economic characteristics of recreationists, their geographic origin and so on are generally meager and leave much to be desired. Nation-wide recreation surveys began to appear in the late fifties (See Cribier, 1969, p. 377 for a list of national surveys carried on in various countries). Still, these surveys afford no insight into past situations and therefore do not permit trend analyses.

Three types of tourist measures have been used and discussed by French geographers: direct counts; extrapolations from probabilistic surveys; and indirect measures. Used alone or in combination, these statistics shed light on the structure and number of "departures" of recreationists and/or vacationists from their home base as well as the number and characteristics of visitors at recreation sites, tourist attractions, resort towns, etc.

In his study of foreign summer visitors in France, Ginier (1969) reviewed the major direct counts relied upon by the French central agencies. These include customs and immigration statistics, number of bed-nights reported by government inspected hotels, heterogeneous figures supplied by the "complementary lodging" industry (camping grounds, youth hostels, etc), and a most interesting technique, the Iter-Card, a personal record turned in by foreigners when leaving the country, which allows the investigator to keep track of their whereabouts during their stay in France. The method is not unlike the use of radioactive tracers in a plumbing system: tourist routes, flow speeds, "bottlenecks", etc. are identified and monitored in the whole of France.

Cribier (1969) also made good use of the S.N.C.F. (the French National Railway Company) central archives. Almost all salaried and retired workers in France are entitled to a once a year thirty per cent reduction on the purchase of a family ticket good for a round trip between two stations located more than one hundred kilometers apart.¹ Five million of these so-called "paid holiday tickets" are sold annually. For her study, Cribier went through fifteen thousand individual application forms for

¹Families with more than three dependant children are also entitled to a special large family discount but have not been studied by Cribier.

these tickets in order to establish the destination, length and timing of trips, and the occupation, residence, and other characteristics of these vacationers. She then mapped the results. Unfortunately, the method does not seem to be applicable on this continent since no similar data source exists in North America.

However, all these and other "direct" measurements of tourism, like car counts, buslines, railways and airlines statistics, sales of tourist attractions tickets, etc., have major shortcomings. Either they are not exhaustive and thus tend to underevaluate what they intend to gauge, or else they lack discriminating power and therefore introduce spurious data. Statistics from customs services are a case in point. The gradual reduction of border formalities has both encouraged international tourism and reduced the fineness of reporting. Some countries count international commuters as visitors (e.g. Spain), others do not (e.g. France). Border statistics tell little or nothing about itineraries, duration of stays, etc. Similarly, it is impossible to discriminate between business traffic and genuine tourism.

To overcome these and other difficulties stochastic methods have been designed. In particular, the French, like social scientists elsewhere, have used and abused surveys

based on questionnaires and interviews and we have little to learn on this continent from the European experience in this respect. However, Cribier is worthy of mentioning for her extensive usage of surveys among high school students. In her attempt to analyse the recreational habits of families, schools in twenty-four French cities were surveyed between 1961 and 1964, involving a total sample of 8000 students (Cribier, 1960 and 1969). The interest of the method lies upon the use of a particularly important captive sample which is relatively willing to cooperate with the researcher.

But the problem of measuring tourism has also been approached in other ways. French geographers have made extensive use of "indirect indices" or what is now being referred to on this continent as unobtrusive measures (Webb, et al., 1970). Seemingly unrelated data and secondary evidence can often be substituted for a more formal survey or at least can be used to supplement traditional interviews and questionnaires. Sales taxes, for instance, vary with consumer expenditures and in turn are a function of the number of tourists vacationing in a given resort (see Ginier, 1969). For that matter sales of many staples can yield valuable insight into the cyclical variations of the population of a region. In France, flour deliveries to bakeries have been well recorded. Juillard (1957) using

an index of "bread consumption" has attempted to reconstruct the social and economic evolution of Saint-Tropez and its region. With the same method Cribier (1961a or 1964a) was able to show how the population density of the country changed during the summer holiday period, to identify which region were gaining and which were losing population, and to measure the relative attractivity of each department.

To be sure, the so-called "flour consumption index" requires that an astonishing number of assumptions be made in order to justify the conclusions inferred from its utilization. Among other things it must be assumed that all flour delivered to a bakery is used for baking bread, that all bread types have identical proportion of their weight in flour; that bakers keep their reserve stocks of flour at a minimum at all times; that bread consumption habits do not vary with age, income, culture, time of the year, weather, etc.; that losses are negligible; that variations in consumption is totally attributable to incoming and outgoing visitors; and so on. Nevertheless, users and reviewers of the method claim that errors introduced in the figures ". . . are rather small in percentage and compensate for each other rather than add up" (Boyer, 1964, p. 13).

Sales of other commodities such as post cards,

stamps, foreign newspapers, etc. are likewise amenable to the same type of analysis. Cribier (1969) also exploited variations of domestic water consumption in city blocks as well as statistics on tonnages of refuse collected per arrondissement per month. Capitalizing on conditions probably unique to Spain, i.e. closed local economies, well kept records of animal slaughtering, a national petroleum company operating in strict monopolistic conditions, a limited number of service-stations the exact locations of which are known, the small size of local automobile pools, etc., Barbaza (1966) examined the evolution of tourism on the Costa Brava by means of ad hoc indices of meat consumption and gasoline expenditures.

In final analysis, it seems that with a little imagination consumption indices suitable for use in a North American context could be developed. Centralized information about consumption patterns exists here in such fields as liquor control, provincial sales taxes, etc. The major appeal of consumption indices for measuring population migrations lies in their discretion, cheapness, ability to highlight past behaviors and their applicability to the study of large regions.

"Tourist potentials" and rates of "tourist function" constitute yet another type of indirect measures of tourism

used by French geographers. The two concepts were developed by Defert (see in particular 1955) primarily for solving management and planning problems. The "potentials" method assumes that the capacities (or potentials) of various tourist services are mutually related and that they should ideally match each other in terms of the number of visitors who can be adequately served by each function or facility considered. For instance, the aggregate capacity of hotels and other lodging establishments at a given ski resort should compare with the possibilities of sport equipment and facilities available and vice versa. Imbalances among tourist potentials therefore signal weaknesses in the tourist service structure of a community. Problems of under as well as overdeveloped sectors are pointed out and can be corrected.

The unit of lodging potential is the bed-night or tourist-night. Since the relationship between offer and demand of bed-nights tends towards a state of equilibrium, Burnet (1964) claimed that knowledge of the lodging potential of a tourist resort provides a convenient surrogate for direct tourists counts when certain conditions are met. Similarly, the relative importance of each class of sleeping accommodations is an indication of the socio-economic characteristics of the tourist flow through that town. Again, vagaries of the touristic conjuncture are faithfully

reproduced in the evolution of the lodging industry. French geographers thus find a pragmatic justification for the elaborate "inventory of tourist equipment" always present in hundreds of case studies.

Once tourist potentials are known, the idea can be developed further by reducing these absolute measures to a common relative base. The results are called rates of tourist function (Defert, 1955). For instance, the rate of lodging of a resort is given by:

$$Tf = \frac{B \times 100}{P}$$

where Tf = the lodging function rate; B = number of bed-nights; and P = population. More simply, it is the number of tourist beds available in the area per hundred population. Such rates provide a measure of the degree of functional specialization of a tourist region or town, that is of the relative importance of tourism as a local economic activity. Highly specialized resorts have a lodging rate above 50 and in some cases even above 100.

Toward a Theory of Tourism

The preceeding discussion illustrates how French

recreation geography has been much more preoccupied with the semantics and measurability of tourism than with theoretical constructs and hypotheses to be tested against reality. This is not to say that French geographers resolutely stay away from model building and the search for laws, but rather that their science is inductive rather than deductive. It will be seen in a subsequent section that--although they appear to be less spectacular--the results and conclusions of French recreation studies are not less normative nor useful for planning purposes than the results and conclusions of their North American counterparts.

Nevertheless, there exists a strain of French recreation geographers whose approach is definitely nomothetic. Heading the group is a specialist in "economic structures", Pierre Defert. Trained both as a geographer, and economist, Defert is a practitioner as well as a theoretician. He authored countless numbers of scholarly publications and expertise reports (see the bibliography for a selection). He is to be commended for his development and application to recreation of regional planning and location theories. In hindsight some of his essays appear to be somewhat simplistic. However, he early insisted that recreation studies should be set from the start within a theoretical framework and yield immediately

generalizable results. His introductions to a "human limnology" (1958) and to a "thermal geography" (1960) purport to serve as examples of this kind of thinking.

In his work on location theory Defert (see especially 1966) sought to identify the locational factors which are relevant to recreation facilities, what agglomeration factors explain regional concentrations of tourism, and how transportation networks condition the success or failure of tourist centres. With this in mind, he reviewed and transposed to problems of recreation the classic models of von Thünen, Lösch, Christaller, Weber, Todt, Crampon as well as more recent theoretical contributions in the fields of econometrics and regional science. Unfortunately Defert has yet failed to produce a really satisfactory unifying model although he has obviously broken the ground for a comprehensive theory of tourist location. In the same line of thought, a paper written in French by the Japanese Yokeno (1968) also investigated specifically how von Thünen's and Weber's models could be applied to the tourist industry.

REGIONAL AND CASE STUDIES

Even though new trends are emerging, it remains a truism to state that regional studies constitute the core and trademark of French geography. Most recreation studies surveyed in this paper also reveal a strong propensity for the monographic description of small geographic units. This section briefly looks at French recreation geography in terms of its regional coverage and topical emphasis. This will help to understand some fundamental differences between North American and West European recreational behaviors. For instance, it will be realized that the heavier population densities of France are matched by a greater density of tourist attractions. For this and other reasons, whereas North American vacationers typically spend a two week summer holiday touring over a lengthy highway circuit, interspersed with half a dozen stopovers, a French family will instead rush to its "second home" in the countryside--if they can afford a second home--or else to a "super resort" from where short day-tours are organized. In turn, the interest of recreation geographers in North America has been directed to large outdoor recreation areas or belts (see Mercer, 1970) while French geographers have placed the emphasis on the study of places and systems of places.

Mountain Recreation

From a tourist point of view, France offers three types of attractions or landscapes: the mountains and their spas and ski centres; the sea-coasts with their long sandy beaches; and, finally, the human landscapes, that is the cities and the countryside (Ginier, 1965, masterfully examined all three types in a little book which quickly became a very popular tourist guide). Recreation in the mountain regions of France has been particularly well investigated. Tourism has always been a leitmotiv of the major monographs on the Alpine and Pyrenean pays (e.g. Blanchard, 1938-1956; Veyret and Veyret-Verner, 1962 and 1967; Verret, 1972; etc.).

A plethora of articles on mountain tourism also has been published mainly in the old Revue de Géographie Alpine for the Alpine regions and the more recent Revue Géographique des Pyrénées et du Sud-Ouest for the Pyrenees. Perhaps two hundred resorts and tourist centres are distributed in the French mountains, some long established, others newly developed, some large and bourgeois, others smaller and more family-like. Most have been studied individually. Typical examples are: Chamonix (Veyret-Verner and Petit, 1972); Mégève (Balseinte, 1959); l'Alpe d'Huez (Barussaud, 1961); Vars (Barbier, 1968); Praloup (Avocat, 1971); Aix-

les-Bains (Janin, 1955); les Deux Alpes (Cribier, 1961), Superdévoluy (Mérianneau, 1967); Saint-Lary (Gras, 1962); la Foux d'Allos (Barbier, 1967); les Dorons (Boyer, 1955); Barèges (Bertrand, 1965; Tulet, 1968); Luchon (Cazes, 1964a) Superbagnères (Cazes, 1964); Ceillac (Richez, 1972); Bellecombe (Mollier, 1970); etc. Other studies have instead focused on a department, e.g. the Isère (Marie, 1967), the Lot (Milon, 1960), or a larger region, e.g. the Northern Alps (Billet, 1966), the Mont-Blanc complex (Guichonnet, 1951), or the whole of Pyrenees (Cazes, 1965). Balseinte (1958) took the whole of France as his province. Dwelling on the locational factors of winter resorts he tried to identify the comparative advantage of individual centres.

Historically, as technology improved and personal disposable income and leisure time increased, and generally as tastes and attitudes changes, mountainous regions witnessed the development of new forms of recreation. Gradually, during the XIXth century, climbing superceded the passive contemplation of peaks with romantic awe. Then a fad for medical cures based on the termal properties and mineral content of spa waters and the miraculous alpine climate appeared. However, the "curist", despite the name, is only nominally a sick person, for the medical treatment is essentially preventive and the "patient" must be free to play golf and visit casinos and dance halls (Defert, 1960).

Balseinte (1966) systematically explored the physiological relationships between medical tourism and the French mountain climates. Atmospheric amenities are found to be a function of biological cooling, relative humidity and actinometric conditions. The old controversy of whether or not there exists such a thing as a mountain climate is circumvented by empirically distinguishing between mountain resorts, altitude resorts and high altitude resorts.

In recent decades, the popularization of recreation opportunities associated with the soaring of snow sports has brought about, in alpine region, a "second economic and demographic revolution" (Veyret-Verner, 1959). This mushrooming of winter tourism has inspired a large number of essays reflecting on the socio-economic implications of snow recreation (e.g.: Defert, 1951; Dainville, 1959; Leconte, 1965; Cazes, 1965; and so on). Of special interest is the conclusion of an article by Préau (1968) who suggested that the typology of winter resorts he painstakingly developed in the paper was already obsolete, for winter "stations" should be considered as components of interdependent resort systems rather than as individual establishments associated with a single supporting community. Furthermore, warns Préau, a new element like the rapidly spreading fad for cross-country skiing is liable to modify beyond recognition, within a few years, all received

concepts about winter recreation.

Some writers sought to describe and understand more specifically the dynamic elements of mountain recreation and the changes these brought about. Roy (1953 and 1953a) looked at the diffusion of tourist development in Dauphiny and at the relationship between tourism and circulation (see Buttimer, 1971 for the extended meaning given to circulation by French geographers). Other articles also examined the impact on tourism of improved highways in the Alps and, in particular, the effects of proposed and recently bored tunnels (Janin, 1965; Vartanian-Traynard, 1969). Joly (1963) showed that the Belgians now outnumbered the English as the single most important foreign national group of visitors in Savoy and Dauphiny. Balseinte (1964) paid special attention to the demographic evolution of winter resorts whereas Veyret-Verner (1964) studied how local communities were adapting to the invasion of winter recreationists. Finally, a recent synthesis summarized the past and potential development of tourism in the High Alps (Dijoud, 1970).

Marine Recreation

The sea-coasts form the other great natural attraction of France. Three sides of the French hexagon are in

contact with the ocean and are nicely endowed with strings of handsome beaches. The Mediterranean zone is second only to Paris as a holiday region (Ginier, 1965, p. 24). In the mid-sixties, there were over 300 important sea resorts in France and approximately 40,000 people were employed in more than 5,000 hotels on the French coasts (Derreau, 1969, p. 384).

Coastal tourism has been given due consideration in comprehensive regional monographs, on the Vendean coast (Papy, 1941), Brittany (Le Lannou, 1939), the Côte d'Azur (Kayser, 1957), and the economy of the Moorish coast has been the subject of an article (Juillard, 1957). But the classic work on marine recreation in France is Villégiature et tourisme sur les côtes de France (Burnet, 1963). The Mediterranean zone, the Atlantic coast and the Channel littoral are each carefully explored, their resources appraised, and the changing characteristics of their clientele examined. An important feature of the book is the detailed description of the major beaches of the country in terms of natural setting, sand quality and various attributes of their micro-climate.

The relationship between commercial aviation and tourist traffic to some of these beaches has been investigated by Dacharry (1959; 1959a; 1964). In some cases, the

existence of a well frequented beach was found to account for the success of a local airport. For instance, Le Touquet, located midway between London and Paris on the French side of the Channel, was the fourth most important French airport in the 1950's using the number of local passengers carried as an index. In other cases, the importance of tourism was largely accounted for by the availability of air service, Corsica being a case in point.

Other articles dealing with French coastal tourism have appeared mainly in Méditerranée for the Southern coast and in Norois for the Atlantic and Channel zones. Resorts which have been studied individually include Menton (Guéron, 1966), Gréoux-les-Bains (Lande, 1965), Valras (Lamouroux, 1960), Corsica (Renucci, 1962), Nice (Dalmasso, 1963), Albenga (Pastorelli, 1972), Saint-Tropez (Raybaut, 1970), Royan (Cotard, 1957), the islands of Ré (Bordarier, 1966) and Noirmoutier (Denis-Heurtin, 1959), Saint-Malo (Delouche, 1956), Deauville (Burnet, 1964), Le Touquet (Cribier, 1965), and many more. Cazes (1968) investigated far away Martinique. The importance and characteristics of the tourist activity have also been investigated in larger areas, like Provence and Côte d'Azur (Wolkowitsch, 1968; Boyer, 1958), or the coasts of Vendy (Bouhier, 1956), Morlaisia (Sauban, 1956) and Normandy (Clary, 1967), and Finister (Ginier 1971-1972).

In final analysis, however, it seems that until recently coastal resorts have failed to attract the attention of French geographers to the same degree as the mountain tourist centres. The reason for this is undoubtedly complex. Part of the explanation probably lies on the fact that marine tourism has been viewed as largely unworthy of developing as an industry (see next section). Except on the Côte d'Azur, the short bathing season seriously limits the number of permanent jobs that can be created. Similarly, the economic potential of tourism has been overshadowed until recent years by alternative means of economic development, like industrialization, for manufacturing was more readily attracted by the greater population densities and the existing port facilities of the coastal regions.

Urban and Rural Recreation

Cultural landscapes constitute the third major set of French tourist attractions. In cities, historical, artistic, religious, gastronomic, and other human resources and facilities provide the basic ingredients of the tourist product. French textbooks on urban geography generally discuss tourism as a fundamental urban function along with the religious, military, intellectual, administrative, industrial, and commercial roles of a city (e.g. Derruau, 1969, p. 464; Chabot, 1948, pp. 54-68).

Excepting the ubiquitous tourist guides, however, few studies have dealt with the geographical aspects of the tourist industry in urban areas. Labry (1965) studied the socio-economic characteristics and geographic origin of clients staying in hotels of Toulouse. In a survey of tourist centres in Southern Pyrenees, Coppolani (1966) observed that a religious sanctuary, Lourdes, ranked as the fifth most visited city in France after Paris, Lyons, Nice and Marseilles. Gaussin (1951-1953) also described the importance of pilgrimages for the town of Puy-en-Veley. The contribution of tourism as an income generator has been examined in Florence (Charrier, 1971).

French Canadian geographers also have been much concerned with the tourist attractivity of cities. Lapierre (1959) discussed the attractions of Montreal. His attempt to delineate the "tourist district" of the city is noteworthy. Visitors tend to congregate and stay within the confines of a relatively small tourist ghetto. Like other economic activities, tourism is found to be a highly localized urban phenomenon.

More recently, Ducharme and Lavoie (1974) compared Montreal and Toronto as convention centres. Although Montreal leads Toronto in terms of hotel accommodations, Toronto hosts more delegates and reaps greater profits from the

economic impact of congresses. The authors suggest that Montreal would benefit from a centralized promotional structure under the control of the metropolitan government, along the lines of the Toronto model.

However, French geographers generally have considered the city not as a tourist hosting area, but as a "departure zone", that is as a generator of recreational demand. Tourism has been described as "urban escapism" (Chabot, 1957). In highly urbanized countries, urbanites and suburbanites indeed form the vast majority of tourists. Cribier (1969) claimed that "the study of holiday migrations is in fact . . . a geography of urban civilization" (p. 5). The second part of her landmark monograph is a brilliant attempt to catalogue the recreational movements of the citizens of twenty-two large urban areas. When she examines the vacation travel of people who work in Nice, she is in fact doing something which can be compared to investigating where the residents of Miami or Las Vegas spend their holidays. Valuable insights are liable to result from such an unusual approach. In particular, the study of the city as a departure zone is a prerequisite for delineating its recreation and vacation hinterlands.

One type of urban recreation hinterland which has caught the attention of many French geographers is that of

seasonal housing. French seasonal homes differ from their American counterparts in many respects. First, they are not necessarily set along a stream or body of water. Second, a large proportion are not cottages in any real sense but "phased out" permanent homes which have been converted to recreational use following the decline of a rural community, or the disposal of an estate by will, etc.

But the main differences have to do with the rate of ownership and the use made of these buildings. In 1964, seven percent of the French households owned a second home compared with a three percent figure for the U.S.A. (Cribier, 1969, pp. 323ff.). It is fashionable for a wealthy French family to own even two or more second homes. As a status symbol second homes have been referred to as savonnettes à vilains (i.e. timepieces for the villains).

In North America, "summer" cottages--in fact they are often winterized--tend to serve as extensions of the usual domiciles. They may be used on short order on weekends and special occasions. On one hand, some cottage owners commute between their work-place and rural retreat, but on the other hand, few people actually close up completely their permanent habitations for any extended period

of time or even spend a whole one month vacation at the cottage.

In France, the second home is a duplicate rather than an extension of the main residence. The distinctions between work and leisure, between the urban and the rural ways of life, between the indoors and the outdoors are perhaps better delineated than they generally are on this continent. This is reflected not in the form of the vacation home itself, but in the sudden change of attitudes and behavior of people when they move into one. The second home is the place of recreation as opposed to the main domicile which is identified with work and daily routine. Cribier (1969, p. 52) estimated that during the summer of 1966, the typical stay of French holiday-makers at their second home averaged twenty-eight consecutive days. Yet says Wolfe (1971, p. 133): " . . . what North American would recognize these houses as second homes if he saw them?"

Whereas few North American geographers "have analysed the spatial location of vacation homes and the resultant pattern of seasonal population distribution" (Ragatz, 1970, p. 448), many French geographers have done precisely that. The best example is still Cribier (1969) who produced a picture for the whole of France following a series of local surveys carried by herself (e.g. Cribier, 1967) and

other investigators, for instance Labasse and Lafferrière (1960) who mapped the distribution of second homes in the Lyons region. Dacquin (1965) wrote about the second homes of Lilles dwellers. The team led by Criber (1967) counted 300,000 second homes in the Paris Basin, two thirds of which were found to be old residences converted for recreation purposes. Parisians also have been aggressive buyers of seasonal houses in other French regions, a fact which has been well documented (e.g. Bordarier, 1966; Clary, 1970; Laborde, 1970; etc).

French geographers thus sought to identify in various rural communities which houses serve as second homes and which do not, who are the owners of these second homes, who rent them, what relationships exist between the permanent and the vacationing populations, etc. Barbier (1965 and 1966) showed how these goals could be achieved through a variety of research strategies ranging from interviews with prominent citizens to direct counts of each individual house. His studies focussed on the Lower Alps (1965), the South-Eastern Mediterranean region (1966), and recreational and urban networks of the Southern Alps (1969).

Following the example set by Barbier, other writers have examined vacation housing in many other regions, e. g. the Bourget Valley (David, 1966), a section of Isère

(David and Geoffroy, 1968), the Department of High Savoy (Bonazzi, 1970), etc. While DeWilde (1968) applied the same methods in Belgium, Praicheux and Robert (1972) also experimented with postal surveys to learn about second homes, their occupants and their impact on the local communities in three areas of the Lower Ognon Valley. Similarly, the study of second homes on the shore of lake Megantic by Ebacher and Lemieux (1972) provides but one example of similar interests on the part of French Canadians.

Finally, Brier (1970) elegantly summarized the whole dossier of second homes in a little book which is at once a multidisciplinary synthesis and a popular introduction to the subject. Particularly noteworthy are chapters three and six which purport to determine the locational factors and economic impact of recreational housing.

Outside France

Regionally, French recreation studies have been mainly concerned with metropolitan France. However, the volume and character of French recreation research based on some specific area outside France cannot be neglected. Aside from those studies published by Belgians, Quebecers, etc., numerous articles and monographs dealing with regions and places outside France have appeared. On one hand,

French geographers have been anxious to monitor the evolution of tourism as a mass phenomenon of global importance. For instance, statistics on tourism in the Common Market and other European countries are regularly reported and discussed in the major French geographical journals (e.g. Gachon, 1957; Ginier, 1965a - 1967; Herbin, 1969; etc.). On the other hand, French geographers have been fond of international comparisons with neighboring countries. For example, Defert (1958a and 1958b) studied the development of tourism on sea-shores and mountains as well as the lodging industry for the whole of Europe.

The comparison with alpine countries has been particularly exhaustive. Mérianneau (1963) looked at the winter resorts of Switzerland, Austria and Germany. Beaujeu-Garnier (1951) wrote a monograph on the region of Brenner. Balseinte (1959-1960) examined the increasing popularity of winter sports in the Austrian Tyrol. Picard (1963) showed how Austrian mountain communities are much more successful than their French counterparts in developing ski resorts without destroying the pre-existing local economies. Articles by Piriou (1967), Bêteille (1968), Herbin (1969) are essentially less elaborate replications of Picard's thesis.

In Switzerland, alpine recreation has been the topic of short monographs like those by Billet (1966) and

Marion and Loup (1965). A Swiss geographer (Bridel, 1970 and 1970a) also published two companion volumes respectively on the geography of tourism and on ski slopes in the Canton of Vaud.

Similarly, a number of articles have dealt with the Italian Alps. Janin (e.g. 1964 and 1968) and Chabert (1967) showed how alpine tourist centres in Italy could well serve as models of what can be done in order to successfully develop recreation resources without sacrificing the local culture.

French geographers have also written about tourism and recreation in Italy as a whole. Hermitte (1962), like Sion in the thirties, examined the economic and cultural implications of foreign tourism in Italy. Rochefort (1971) tried to discriminate between the static and dynamic elements of a "geography of employment and holidays" in Italy. One of the traditional hosting countries of the world, Italy, is shown to be increasingly involved with entertaining her own citizens.

Of course, French geographers also sought to compare foreign watering places with their own "métropoles de bronzage" (the phrase is from Ginier, 1965). For instance, Dalido (1946 and 1956) and then Ginier (1970) have watched

the development of tourism in Jersey Island where the British government has tried to protect a declining agriculture against the growing "mono-economy" based on tourism. In Spain, Besson (1964) surveyed tourism in the Province of Gerona and a major monograph of the Costa Brava by Barbaza (1966) includes a thorough description of tourism along the coasts of Catalonia. Barbaza (1970) also compared the three different modes of development of coastal tourism in Spain, the Mediterranean Socialist Republics and France (see below p. 65). The comparative advantages of air and sea transport and the significance of these services for the tourist economies of the Western Mediterranean Islands have been analysed by Dacharry (1964). Airplanes and ferryboats are shown to be complementary services catering to two different tourist markets rather than competitors for the same body of clients.

As one might expect, French recreation geographers have been much less inclined to do research in regions outside Western Europe. To be sure, there are exceptions, for instance Wolkowitsch (1961) and Miossec (1972 and 1973) who have been concerned with tourism as an answer to underdevelopment in Tunisia. However, many monographic studies on Canadian and North African recreational problems and tourist areas have been carried out by French-speaking geographers living in those parts of the world. In North

Africa, excellent articles have been written on the Ivory Coast (Flatres-Mury, 1972), Lebanon (Kfoury, 1959; Prost-Tournier, 1974), Morocco (Troin, 1967; Péré, 1972), etc.

In Quebec, although a lot of work has been done on outdoor recreation and tourism by geographers in universities and government agencies, few monographs have actually been published in professional journals or elsewhere. For instance, Brière (1961) set the framework for a recreational geography of Quebec and then completed an exhaustive doctoral dissertation on the subject (Brière, 1967). Unfortunately, the work remains unpublished. Recreational monographs of some importance which have been published in abridged versions have dealt with the Gaspé Peninsula (Brière, 1959), Montreal (Lapierre, 1959) a resort in the Eastern Townships (Raveneau, 1957), etc.

Although they were completed in Canadian universities, these studies truly belong to the French school of geography with which they share the same concern for well-defined geographic units, a tendency to be descriptive, and a literary style in line with classical traditions.

PLANNING AND NORMATIVE STUDIES

Even though French geography has established a reputation for being generally descriptive, encyclopedic and regional in character, it has nevertheless been, in a sense, a "normative" geography. The format of the traditional monographs which have been produced by the French school since Vidal de la Blache imparted orientation to the field at the beginning of this century has been described as follows:

In its classic form, this type of study includes an attempt at regional delimitation (as often verbal as cartographic), followed by a lengthy description of the natural factors influencing the region, a review of its historical occupance, a discussion of the prevailing social and economic conditions, and, not infrequently, some consideration of the problems facing the region and their probable resolution (McDonald, 1965, *italics mine*).

Put another way and quite simply, the task of geography in the French tradition consists not only in describing what is but also what ought to be.

It can be readily realized from the preceeding section that French geography of recreation does not differ from the field at large in terms of its predilection for monographic studies. Again, most of the works discussed above have a normative goal and content. In fact, the

majority of the articles which focus on a single tourist centre or tourist region typically include the following parts:

1. a description of the physical factors (climate, topography, etc.) and location of the station (or region) which explain its recreation function;
2. a short history of the local economy;
3. an assessment of the lodging facilities (capacité d'accueil);
4. a survey of the various forms of recreation and tourism associated with the area and of the socio-economic characteristics of the clientele;
5. a review of the present developmental problems;
6. suggestions as to how these problems might be solved.

From a different point of view, these studies could also be easily divided into three groups:

1. A limited number of articles purport to show how the symbiosis between the traditional primary economy and the more recent recreation function has been a success for a given station or region. These developments are thus offered as models to be imitated (good examples are Chabert, 1967 and Mollier, 1970).

2. A growing number of studies, on the contrary, look at resorts which have been less successful with a view to pinpoint what has gone wrong so that the same errors can be

avoided elsewhere (e.g. Ginier, 1971-72; Renucci, 1962).

3. Finally, other works spotlight on areas where economic mutation is still taking place actively. These stations are thus looked upon as pilot ventures which should be watched and evaluated closely by planners (e.g. Richez, 1972; Sangay, 1966; Mériandeau, 1967).

But, perhaps more importantly, French recreational geography can also boast of a class of planning studies in their own right. In the remainder of this section, books and articles which specifically seek as a primary purpose to rationalize the development of tourism and outdoor recreation will be reviewed under four headings: (i) works which stress the need for recreation planning; (ii) those which deal with increasing levels of participation (i.e. social tourism); (iii) those which consider tourism as a tool in regional development; and finally (iv) those which look at tourism as a source of conflict.

The Need for Planning

In the late 1950's and the early 1960's, it became evident that tourism and outdoor recreation constitute a continuing force in the economy which cannot be treated as a negligible entity. The vogue for large scale surveys of

vacational behavior began in many countries at about that time: in the Federal Republic of West Germany (1958); in Belgium (1959); in the Netherlands (1960); in the United Kingdom (1961); in Sweden (1960); and in the U.S.A. (1959) (Cribier, 1969, pp. 377-379). In France, the National Institute for Statistics and Economic Studies (I.N.S.E.E.) had initiated a yearly survey of vacationing habits as early as 1949 (ibid., p. 13).

The most powerful pleas stressing the need for concerted governmental planning of tourism and recreation were made by geographers at the turn of the fifties. Boyer's "elements" for a policy of tourism appeared in 1959, followed the next year by Defert's call "for a tourism policy for France". The two works, of course, have much in common. They not only ask for more rigorous planning, but they are also conceived as state of the art syntheses, on which, one imagines, people could base their political wishes, and technocrats, their propositions for effective action. Defert, for instance, includes in his book: a chapter on "historical landmarks" of tourism; a discussion on the contemporary need for recreation and vacationing; a lengthy review of the role and "doctrine of transportation media" as regards tourism; two chapters on hotels and other forms of accomodation; and so on.

Paramount among the concerns of this book and indeed, of most literature on tourism during this period, is the rather blind belief in the correlation between tourism and money. Tourism was seen to need to be planned because many regions and the country as a whole could not but increase their economic well-being with a bit of planning.

It is interesting to recall that mandatory paid vacations for all workers go back to 1936 in France and that " . . . contrary to what goes on in the United States for instance, priority is given by labour unions to longer annual vacations rather than to a shortening of the work-week"(Cribier, 1967, p. 44). The result is that since 1965 the great majority of salaried workers have enjoyed four weeks of paid vacation each year. Since 1959, the four week paid annual vacation has been required by law. In effect two citizens out of three in urban areas leave the city for their summer vacation (ibid., p. 23 and p. 45).

The real problem is that almost everyone leaves at the same time. In August, life in a city like Paris becomes rather anaemic, whereas in tourist centers, severe overcrowding is the rule. This situation entails a series of frictions and diseconomies which have been pointed out by tourism experts in many fields, and particularly at a symposium held in Nice by the Faculté de Droit d'Aix in

May 1962. Fresh milk, for example, has to be converted into butter or cheese in major cities at a time when production reaches a maximum. Elsewhere, excess transportation, recreational and lodging facilities must be built and maintained at great expense to provide for--and cash in on--this short but mighty tourists tidal wave.

Among geographers, Boyer (e.g. 1960) and Cribier (e.g. 1962) have looked at the possibilities of spreading holidays and vacation peaks over longer periods of time. Interest in this approach tends to fluctuate, however, since it seems that there are as many arguments against and psychological resistance to vacation spreading as there are sound economic reasons for it.

Dumas (1973), for one, argued that the financial hardships imposed on many tourist towns in order to develop extra facilities so as to cash in on demand peaks are in fact offset by increased revenues and thus are not necessarily a bad thing. In other words the alleged problem of over-equipment is often in reality a sign of good local entrepreneurship. In his study of the Arcachon river basin, Dumas (1973) writes:

It can be appreciated that if tourism brings about equipment and budgetary problems to these communities, it is precisely these same communities which grow rich, whereas their neighbouring communities of the Landes, which are not as well endowed by nature, doze off and experience the much more serious difficulties of being resourceless rural communes (p. 753).

In a recent article, Beaujeu-Garnier (1974) discussed the new regional equilibrium which is slowly emerging in France. Efforts are now made to decentralize the "dictatorship" of Paris as the ever dominant metropolis and a renewed awareness for planning on a regional scale has appeared. Similarly in recreational studies, the calls for planning tourism on a national level which were sounded in the early sixties are being replaced by a finer appreciation of regional policies. Typical in this respect is a cartographic study of "bed-nights" spent in hotels of the Northern Alps (Billet, 1966) in which a number of subregional disparities are pointed out and attributed in part to the lack of a good concerted regional development policy. Other writers also have documented the recreational possibilities of the neglected "middle altitude" mountain zones in an effort to decentralize recreational development and alleviate seasonal bottlenecks (e.g. Durand, 1966).

Democratic or Social Tourism

In a very thoughtful book, Siegfried (1955) identified two major ages of tourism. During the first, Ancien Régime or "handicraft" period, tourism was an experience reserved for the "aristocratic" few who could afford a romantic vision of the world. The second era, which he dubbed the "mechanical" period, is contemporary to the diffusion of the motorcar electronic communications and paid annual vacations. It is characterized by industrial technology, collective experiences (e.g. sight-seeing bus tours) and "democracy", meaning that just about anybody can now engage in tourism if he or she so desires.

At best, this concept of democratic, social or popular tourism is a multi-dimensional one yet to be clearly defined (see Dacharry, 1965). Nevertheless it has pervaded the literature of recreation everywhere. Its most interesting aspect in France has to do not as much with the consequences of mass participation in leisure activities as with ways to increase and improve this participation.

In particular, much attention has been given to the development of inexpensive tourist accomodation. The development, social and economic impact, locational patterns,

etc. of the more classic forms of cheap lodging facilities, like tenting and "caravaning", youth hostels and holiday camps, have been examined by geographers (see for instance Borniche, 1958 and Devun, 1958). But even more imaginative experiences have been going on for some time: Villages-Vacances-Familles or V.V.F.; Villages-Vacances-Touristes or V.V.T.; club de vacances and gîtes ruraux (see Baretje, 1969 and Chadeaud, 1968 for overviews).

V.V.F. is a non-profit organization sponsored by hundreds of social bodies, like credit unions and service clubs and groups of all sorts. This association has created dozens of genuine "vacation villages for families" throughout the countryside. Lodging in a modest bungalow, communal meals, children day care, and organized social activities can be enjoyed by members of a family for a rock bottom fee during their stay in one of these holiday villages.

Recently, more expensive V.V.T.'s or "vacation villages for tourism" have also been developed in an effort to ease the competition for accommodation in V.V.F.'s by members of wealthier social strata. Thus "despite the goodwill of the Association, it can be seen that the laws of the market place efficiently contribute to segregation in holiday spaces" (Cribier, 1969, p. 345).

Vacation villages have also been operated—indeed the concept itself was originally developed—by commercial and quasi-commercial clubs de vacances. A complete "village mythology" has been created by these disguised travel agencies who sell their members package deal contracts for exotic vacations in far out architectural environments in far away places. In 1969, forty-one villages were operated by the number one, Club Méditerranée, only ten of which were in France (Boyer, 1972, pp. 89-97).

But perhaps the most innovating and socially oriented policy in terms of low cost tourist accomodation has been the creation of gîtes ruraux (literally rural resting places). Under this scheme, a homeowner can qualify for a grant and low interest loans to renovate a rural house under the condition that for a period of ten years the house in whole or in part will be made available for sharing with urban dwellers for rent during holiday periods. The contract also specifies that: "The best reception shall be extended to the tourist who shall be considered as paying guests; the utmost shall be done to facilitate their stay and ventures and [satisfy] their needs for touristic information" (quoted in Chadeaud, 1968, pp. 274-275).

This formula properly amounts to killing two birds

with a single stone. On one hand, as a rural planning policy, farmers and other country people are encouraged to stay on their land. The local economy is given a boost by tourist spending. Picturesque "pastoral" landscapes are preserved. Vernacular houses are saved yet modernized. In the Lower Pyrenees and Landes,

The development of gîtes has been accompanied by a comprehensive renovation of the traditional rural habitat. In forty-nine per cent of the cases, walls have been built since, due to the large size of the rooms in Basque and Bearn rural houses, partitions were required. Often tourism has been responsible for the introduction of the most basic sanitation fittings on some farms (Chadefaud, 1968, p. 295).

On the other hand, as a recreational policy, "Gîtes de France" has made available in the countryside thousands of second homes to people who could not otherwise afford to buy or build their own. Urbanites can participate in agricultural chores and form new friendships. Most tenants remain in the same home for the full duration of their summer holidays (four weeks) and a large percentage return to the same place year after year. In 1967, in the Lower-Pyrenees and Landes, 63.5% of these vacationers stayed at the same home for the whole of their vacation and 36% had previously rented the same home (ibid., pp. 290-291).

The preferred attention that has been given to lodging facilities by French planners can also be understood

without direct reference to social policies. Lodging, rather than natural or historical attractions is seen as the primary factor explaining successful local tourist industries. Boyer (1972) writes:

The science of tourism cannot rest on would-be determinisms; a classification of the French departments in terms of number of tourists attracted cannot solely be a function of an index of natural and/or historical attractions; early implantation often explains preponderance. A mix of lodging types, which insures the most harmonious development of tourism, can be observed in all of the most frequented departments. Why? Because tourism is all in one. There can be no zones dedicated to luxury tourism and hotel lodging because of abundant natural dispositions alongside apparently less gifted ones which would therefore be reserved for so-called social tourism. This view, alas! a common one, has led to some planning blunders (p. 45).

But cheap accommodations are of little use if people cannot get there. The relationship between tourism and public transportation systems have been studied by Mérenne (1971) for the Belgian region of Ardenne. He found that local railway and bus services were planned with little regard for tourism. Out of the three tourist areas he studied, two could not be reached easily by lower class citizens. Frequencies of service did not vary with tourist traffic and generally tourist transportation needs were poorly satisfied. He recommended, among other things, adding new fast bus lines and more frequent service especially on Sundays.

Another important category of works concerned with "social tourism" in the French geographical literature has to do with ways to enhance the recreational experience per se. As in North America and elsewhere--and perhaps earlier--a lot of attention has been given in France to the preservation and conservation of large areas for both scientific and recreational purposes (see Clout, 1975). Six national parks have been created since 1960. Geographers have kept a very critical eye on these developments (e.g. Préau, 1964; Chadeaud and Dalla Rosa, 1968; Richez, 1971).

However, preserving the wilderness ranks second to providing more recreation opportunities in planning goals. As there are relatively few large and undisturbed sites left for establishing genuine national parks, more emphasis has been put instead on developing "regional natural parks". At least thirty are now in various stages of completion. Geographers promise to keep an eye on these also (e.g. Dion, 1972).

One way of improving the recreational experience is through "tourist education". This recurrent suggestion is at best a multi-pronged statement in the French geographical literature. For Rigole, (1972), the "dangerous public" must be taught to respect nature so that the recreational resource may become more enjoyable to more people. For Jail

(1975), a major role of alpine sports clubs is going to be the restoration of quality mountaneering by insuring adequate training for climbers. For Durand (1968), country-dwellers should increase their awareness of tourism and its economic importance and possibilities. Special training sessions have been created for that purpose. For Brochu (1957), in Quebec, highways are much too silent. With a little imagination, relevant place-names and signs could be used to instruct the traveller.

But Dainville is probably the most concerned of tourist educators. As a Roman Catholic priest and recreational geographer, Dainville is also the leading expert on moral and religious questions related to tourism. His major work is Le tourisme et la pastorale (1964). He writes (1956):

Whatever form it takes, tourism offers the infinite wealth of a return to nature and contacts with people. Tourists must be trained to understand this unfamiliar lesson. During springtime, they coolheadedly trample in wheat fields believing it is turf; they have no idea what a tree is and do not know, which is even worse, how to relate to people. Let us teach them how to see, to revel through the eyes in the beauty of nature. For that matter there is no need to travel to exceptional sites. To whom who knows how to look at it, the world brings the magic spell of discovery, the embellishment of each minute, a continual state of fascination . . . One must be less preoccupied with seeing more things than seeing things better (pp. 72-93, italics mine).

Of course, a basic assumption in this quotation, and a very common one, is that tourism is essentially a recreational experience in the etymological sense, that is, a re-creation of the body and the mind. This can be contrasted with Boyer's (1972) view that tourism, on the contrary, is most alienating and frustrating.

The touristic escape cannot, in fact, have but little if not any educational value . . . The inclination for speeding, the conceit with hourly records give little time for more than a glance at sites and monuments, provided always that these were listed and recommended in the guide-book. Tourists look at what they have been told to look at, that is at what must be seen. There is no place for the unexpected; one cannot go like this at a venture, free from care and doctrine! . . . The attractiveness of organized tours is measured by the number of kilometers travelled . . . Thanks to photographs, reproductions and guide-books, tourists know in advance what they are going to see. They fall victims of "sight-seeing", that is they do not travel to the real thing but to images of it (pp. 240-241, italics his).

Tourism and Regional Development

The creation of tourism and recreational facilities has been used in France, probably more so than anywhere else, as a primary tool in regional planning and redevelopment. A master thinker in the field, Gravier (1964), reflected that a humane planning philosophy must necessarily take leisure needs into high consideration, for twentieth century Man is searching less for "ore deposits" than for

"tourism deposits". The development of a major park is viewed as an integrated economic and social investment (see Chadeaud and Della Rosa, 1968).

In many cases, tourism effectively cured ailing local economies. The stories of villages "sentenced to death" a couple of decades ago but which achieved spectacular recoveries since are numerous; Ceillac in Queyras (Richez, 1972), Bonneval-sur-Arc, Lanslevillard and Bessans (Jail, 1973) constitutes but a few examples. Tourism "came to the rescue in mountain regions" (Veyret-Verner, 1956) but was also a "blessing" for dozens of tiny coastal communities (Bouhier, 1956). In Northern Alps, snow sports literally brought about "a second economic and demographic revolution" (Veyret-Verner, 1958). Even in areas already well endowed with a sound agricultural base, a "peaceful coexistence" of traditional and recreational functions is found by farmers to be desirable as new outlets for farm products are provided (Durbiano, 1974).

Theoreticians tried to come to grips with these rejuvenating processes so that planning principles and methods could be isolated and systematically applied (e.g. Defert, 1960c and 1966; Philipponeau, 1960). The positive consequences of successful implantation of tourism have been identified. The most obvious is the generation of new

employment and the demographic impact that follows.

Bravard (1956) documented how chronic population decrease had been effectively stopped and reversed in the Southern Alps. Other writers (e.g. Gibergues, Pechberty and Sarrut, 1970) have shown how tourism introduced, almost forcibly, many physical improvements and modern conveniences in backward communities, like the building of modern roads, the installation of water and sewers, the electric lighting of streets, the collection of garbage, etc. In a study of Chamonix, Veyret-Verner and Petit (1922) indicated how this resort town had acquired germane urban characteristics over a lengthy evolutionary period. To-day, the demographic and employment structures of Chamonix now compare with those of larger cities whereas, for instance, "a mill-town is often more mill than town". Desplangues (1973) suggested that "the flight from the countryside works like a boomerang". A declining agricultural base is an invitation to city dwellers to transform farm houses into second homes and irrigation reservoirs into swimming and fishing pools. Draught-horses are phased out by saddle-horses. A novel form of land use emerges as subsistence agriculture is gradually superceded by "agritourism" or "leisure agriculture".

Therefore, the development of a tourist industry is not necessarily the result of a deliberate and concerted

effort. In this respect, Barbaza (1970) identified three different forms of tourism on the Mediterranean coastal regions: the Costa Brava, the Rumanism-Bulgarian and the Languedoc-Roussillon types. In the Spanish model, tourist movements spontaneously arose and preceded the construction of adequate facilities. Hence recreational sprawl tends to clutter the landscape with shoddy architecture and reduce the resource potential. The planners task in this case is to achieve proper control and even slow down this feverish process. In the Central European republics, on the contrary, tourism had to be "provoked". New resorts were thus built from scratch and with little regard for their proper insertion into the regional fabric. "The resorts (Mamaia, Golden Sands, etc.) are very localised and are strictly functional, holiday-playgrounds in their pure form (Barbaza, 1970, p. 469; the quotation is from the English abstract).

In the French model as typified by the Languedoc-Roussillon project, tourism is the major element in a concerted development policy involving an extensive region along the Westernmost third of the Mediterranean coast. This large scale operation has been described as a "future French Florida" (Ginier, 1965, p. 36).

In an area approximately 200 km. long by twenty km. deep, belonging to four départements and sixty-seven communes, it is planned, since 1963, to build five new watering-places [a sixth one has been added]

which would eventually function as central places within larger tourist units capable of receiving 100 to 120 thousand persons each. A major preoccupation is to avoid continuous urbanization along the narrow coastal belt. This led planners to delineate, on the usable 180 km. portion of the seacoast of which 130 km. is sandy beach, six distinct sectors called units, a new and essential concept here. Each unit, pursuing its own specific objectives, will have a full range of lodging and recreational facilities and will be self-sufficient as far as tourism is concerned. Each will be separated from the others by protected nature zones in order to avert speculation and peripheral degradation processes and to allow for the development of complementary facilities in later stages. Each unit also perpetuates a traditional relationship with one of the hinterland cities which provided the coast with most of its recreationists before the plan: Montpellier, Nîmes, Béziers, Narbonne and Perpignan. Finally, in principle, each unit is to combine existing resorts and new ones created ex nihilo nearby (Cazes, 1972, p. 196).

Yet, at the beginning of the seventies, there are signs that this grandiose scheme, the ultimate in French regional planning, "raises more questions than it solves" (ibid, p. 193). For tourism after all is not the panacea many imagined it was.

Tourism and Conflicts

The "myth of tourism as providence" (Veyret, 1971) is increasingly discredited by French geographers. Barbaza (1974) writes:

The problems of tourism and rural space are sometimes seen as complementary, sometimes as conflictual in nature. When seen as complementary, tourism activities are perceived as compatible

with agriculture and capable of improving the rural standard of living. They are viewed as conflictual when tourism activities are developed at the expense of agriculture, when control of the land is at stake or when social and real estate values are upset. There is conflict in sum whenever tourism is entangled in a spatial system based essentially on agricultural production to which is superposed another system, built on an entirely different logic, projecting in the rural space urban needs and organizational modes.

The body of French geographical literature on the conflictual aspects of tourism is a rather large one and is still growing. Articles which demonstrate that the perceived positive impact of the tourist industry is exaggerated constitute the most innocuous ones. Such is this study of Cherbourg, an important ferry terminal and port of entry of British visitors to France (Soumagne, 1974) the conclusion of which warns that "the animation of the piers during a number of weeks should not conceal the facts: traffic escape from the port: the maritime company is foreign-owned and most of the passengers are strangers who will not stay either in the city nor in the region" (pp. 238-239).

A four day colloquium held in Grenoble (October 1972) on "tourism and employment in the Alps" illustrated some interesting facts (Geographical papers presented at this colloquium have been published in the Revue de Géographie Alpine, 1973, pp. 509-570). In general, "tourism appears to be a very important generator of employment" (Herbin,

1973, p. 258). Nevertheless, most of the jobs created are seasonal and unattractive and offer little employment security. As a result, both labor shortages and unemployment occur periodically. The development of a local tourist industry often fails to prevent the "rural exodus". The native people do not care for the new openings which they consider to be temporary. According to Loup (1973), official censi tend to underestimate the number of persons employed in tourist activities in good part because "the censused prefer to be counted in the 'no occupation' category rather than to declare a trade which they hope to quit as soon as possible" (p. 543). Tourism therefore is largely dependant on one hand on foreign immigration and thus is subject to whimsical national policies (Billet, 1973), and on the other hand on complementary and unskilled labour. "The most notable fact is no doubt the degradation of women to inferior jobs . . . Women currently hold a quasi-monopoly on maintenance, housekeeping and sundry functions"(Janin, 1973, p. 552).

The benefits of tourism have been questioned even more bluntly. According to Veyret and Veyret-Verner (1966), the development of a tourist industry has often been more a form of colonization than proper resource management. For Avocat (1971), the so-called regional development corporations tend to function as new masters rather than servants.

In most resorts, as in Vars (Barbier, 1968), the local population is "economically and socially ousted". For instance, modern hotels are built by large chain operators soon driving small inn-keepers out of business (Leconte, 1965). Bordarier (1966) found that in many villages on the Island of Ré Parisians own more than half the homes. Renard (1972) described how resistance to this "touristic colonization" is related to settlement patterns. The smaller the size of farms, and consequently the smaller the farm income, the sooner the property will be sold as a second home to some urbanite even though a reformation of agrarian structures would save fertile land and restore a thriving agriculture.

Many writers, such as Calmettes (no date) and David (1966), deplored the financial burden which are imposed to small municipalities by this "new population" of second home owners who demand better services whereas they expand the tax base much less than "native" first home owners. Increasing tax rates then precipitate the decline of agriculture.

So do other processes (see in particular Cribier, 1961), and in particular acculturation. Lucchini (1966) recalled how tourists attitudes and social characteristics basically differ from those of the "native" in Ajaccio and

and Valinco. Whereas, for instance, visitors actively seek the sea and its amenities, the local population share an atavistic repulsion for it. Besson (1964) showed how in Gerona traditional social values were eroded and replaced by lax moral standards brought in by tourists. It is also well known that tourism can introduce in a region "socially undesirable" activities like prostitution, gambling and drug traffic (Tempelman and Peppelenbosch, 1974, p. 86).

But contacts between different groups of tourists and between visitors and the visited can also be consciously limited to a minimum. Cases of social segregation have been studied. In Le Touquet, Cribier (1965) distinguished five different categories of recreationists according to the type of accommodations they adopted and the activities they engaged in. These groups were then found to be also different in terms of their socio-economic characteristics and country of origin. She writes:

Le Touquet, a new town originally designed to be the utopian leisure city of an utopian classless society, has been remodelled through the evolution of her clientele and their tastes. The resort illustrates two fundamental geographical traits of all Western European cities: socially differentiated districts and the expression, in the urban landscape, of History, in this case the history of holidays and their myths (p. 49).

Similarly, in Third World countries, Western hotels, bars, beaches and "guarded private campgrounds and swimming

pools" constitute genuine "tourist ghettos" (Tempelman and Peppelenbosch, 1974, p. 86). Similarly, Cazes (1968) compared the luxurious hotels of Martinique, where North American tourists are "geographically and economically isolated", to "warts" on the landscape.

Tourism has always been appealing as an instrument of economic development to planners and decision-makers in "developing countries". Tempelman and Peppelenbosch (1974) write: "Close to the totality of Third World countries seem to expect miracles from tourism" (p. 87). Yet, just as in developed nations, the creation of a tourist industry in the Third World involves numerous trade-offs and serious drawbacks. The planning conflicts which have been exposed above apply to all tourist regions large or small, rich or poor. But others are specific to underdeveloped countries and have also been examined by French geographers.

In particular, Burnet (1970) argued that the economic benefits of tourism which can be reaped by a country are more or less a function of the stage of economic development of this country. Modern tourists are a spoiled bunch. They demand all the amenities found in the wealthier parts of the world--and sometimes more: good roads, electricity and telephone systems, adequate water supplies, and in some areas insect control, reforestation programs, etc. Unless

extraordinary efforts are made toward development in general, underdeveloped countries tend to remain "touristically underdeveloped" as well. Similarly, poorer countries must import most of the commodities required by a vigorous tourist industry and not only producer goods but also in some cases food, wine and even souvenirs. Again, it is often not realized that the majority of the tourists who spend their holidays in a given "advanced" country are generally citizens of that same country. The travel industry of an underdeveloped nation, on the contrary, must rely almost solely on foreign patrons for their clientele.

A comprehensive survey of the conflicts generated by tourist and recreational activities brought to light by French geographers would indeed cover pages upon pages and fall beyond the scope of this essay. Accounts of how tourism accentuates rather than relieves disparities in Tunis (Miossec, 1972), Corsica (Renucci, 1962) and even in Languedoc-Rousillon (Vielzeuf, 1972); reports of clashes and tensions between recreationists and other land users (e.g. Reffay, 1975); discussions about many aspects of tourist alienation (e.g. Defert, 1960b); studies of cases of resort "obsolescence" (e.g. Sceau, 1974) and excessive, "overtechnocratic" recreational planning (e.g. Vielzeuf, 1969; Veyret-Verner, 1971) constitute regular features of professional journals.

French geographers have been inclined to blame tourism for its "imperialist" impact on other activities, like agriculture, but instances of tourist "vocations"¹ jeopardized by agricultural revival and industrial development have also been documented (Bonneau, 1974; Dewailly, 1974). But the point is already made: unlike American studies which "almost all place greater emphasis on the benefits of tourism than on its costs and drawbacks" (Arthur D. Little, 1967, p. 57), French studies in recreation geography, on the whole, and often individually present a more balanced picture.

¹The concept of "regional vocation" is a very common one in French planning and probably constitute a sequel of environmental determinism and possibilism. It can be defined as the bundle of specific (geographical?) aptitudes which render a given region especially suited to play a particular production role within the economic system.

OTHER TRENDS AND DIRECTIONS

In his history of French geographical thought, Meynier (1969) distinguishes three periods in the evolution of the French school: the period of hatching (1872-1905); the period of intuition (1905-1939); and the period of creaking (1939-1969). This last period, he claims, is characterized by eight major concerns: for (1) numbers, (2) nature, (3) processes, (4) cartography, (5) "homo oeconomicus", (6) efficiency, (7) competition and competence, and (8) for the development of a global geography.

A salient feature of French recreation geography is the degree to which the subfield is intertwined with geography as a whole. Indeed few geographers in French-speaking countries would admit that their research interest lay chiefly let alone exclusively, in recreation. For instance, it has already been shown in preceeding sections that recreation studies often constitute parts of comprehensive regional monographs or of other more substantial works. Veyret-Verner, for example, although well known as a recreation geographer, was above all a student of the Alps. An anthology commemorating her recent death (Veyret-Verner, 1975) presents twenty-three of her major essays, yet only four of these primarily deal with recreation and tourism.

Conversely, geographers who are generally not involved in recreation research will not hesitate to tackle recreation problems on occasion. A good example is provided by a recent article by Hamelin (1974) in which he investigates the possibilities of developing tourism in Northern regions of Canada. Hamelin being the founder and director of an institute for Northern studies at Université Laval, the paper is obviously incidental to a much larger research framework. Similarly, Philipponeau's (1960a) examination of tourist activities in a study of the social and economic future of Quebec's Eastern townships also seems to be peripheral to this author's much broader concern for regional planning (e.g. Philipponeau, 1960 and 1967). (Philipponeau is currently chairman of the I.G.U. Commission on Applied Geography). These examples suffice to illustrate how congenial a place is occupied by recreation and tourism in the whole of French geography.

It can easily be documented, therefore, that French recreation geography reflects essentially the same concerns as those outlined by Meynier. It falls beyond the scope of the paper to do so but, for instance, the concern for numbers is apparent both in the effort to measure tourist phenomena (see pp. 19ff) and in the use of sophisticated techniques of statistical analysis. A representative study of a new breed of quantifiers is Commerçon's (1973) attempt

to explain the distribution of second homes in the Mâcon region. It uses regression analysis and computer cartography to make sense out of a wealth of "easily available" demographic, topographic and recreational statistics.

Certainly more striking to North American geographers is the concern for cartography displayed by French recreation studies. This concern finds expression not only in the quantity of maps produced but also in the type and variety of information which is graphically conveyed and often in the aesthetic quality of the presentation as well. One can find, for instance, a twenty page article on hunting and fishing (Dainville, 1958a) illustrated with a set of maps of France showing, among other things, the percentage of adult males in each French department who engage in angling, the migratory routes of wild drakes and the population density of rabbits.

Many doctoral dissertations are published complete with a separate folder holding a set of large polychrome plates. The main body of Le paysage humain de la Costa Brava (Barbaza, 1966) is interspersed with 104 figures, most of them elaborate maps, plus fifty-seven photographs. In the folder beautiful multi-colored maps show the land use and land ownership structures of sections of the study

area.¹ La grande migration (Cribier, 1969) likewise contains dozens of maps and photographs. But the map supplement remains unexcelled with 176 color maps printed on thirty-three plates. In his enthusiastic review of the work, Wolfe (1971) felt compelled to spend as much time describing these appended maps as with discussing the main text itself.

The following paragraphs are excerpts from Wolfe (pp. 133-135):

The very first plate in the folder, consisting of two maps (they are the multi-colored ones) gives an idea of the scope of the study. The first map gives details about the summering places frequented by the thousand families who make up Cribier's Paris sample. Five different kinds of places are shown, each in its own color--hotels, lodgings, second homes, the homes of friends and relatives, and camp- and trailer-sites. One glance suffices to show that Parisians on vacation tend to stay close to their city, in the Paris Basin, in second homes or with friends and relatives and for the rest spread themselves out among the commercial accommodations on all the coasts of France. . . . The second map gives a vast amount of information in small compass, in a characteristically European way. Squares and circles, which are open and filled, with intact and broken lines, and in five colours, give details about temperature, rainfall, sunshine and climatic classification at 80 different locations in France . . .

¹Tourism is not, strictly speaking, the sole concern of this regional monograph which also describes in a classical fashion the physical and social milieux of the Costa Brava as well as the development of its genres de vie and human landscapes. Therefore most of the cartography is of little interest to recreation geographers in terms of content. It is not so with the next example, however.

There are 20 plates giving details about the places where a sampling of people from 22 towns and cities aside from Paris (seven of them in the south) spent summer vacations of more than eight days. As with the Parisians, the vacationers from most of the other towns in France tend on the whole to stay pretty close to home. . . . The next seven plates give information that we would gladly have had for the North America of, say, 40 years ago, but that is no longer appropriate here. This information is about rail travel--the important origins and destinations, the occupational status of passengers, the number of railway tickets sold, and so on and so on--a vast amount of information about a world that is now, alas, foreign to us in more ways than one. The next two plates divide people from 12 urban places into two occupational classes, and show how they distribute themselves on their vacations in France. The two classes are "employees and workers" and "others." One might hypothesize that there would be significant differences between the two occupational groups, but no striking ones appear in the two maps. We have now briefly examined 30 of the 33 plates. The final two in the series are the only ones that are not based upon the whole of France. They contain detailed topographic maps, one at a scale of 1:2,000,000, the other six at 1:1,000,000, showing the precise location of the hotel, second home, and so on, where the people staying close to Nice, Perpignan, Marseilles, Lyons, etc., spend their vacations. The plate we leave to the last, number 31, is perhaps the most interesting, for it is the only one in which an attempt at generalization is made. Each of its six maps compares the vacation habits of the people from one pair of more-or-less neighboring cities. Strasbourg is compared with Nancy, Rennes with Rouen, Reims with Dijon, Marseilles with Montpellier, Bordeaux with Toulouse, and Lyons with Clermont-Ferrand. It is a fascinating set of maps. One sees that non-commercial accommodations predominate close to home, but that the people of Marseilles and Rennes are atypical in this respect. One sees again, as one saw earlier, that the people of Rouen gravitate wholesale to the nearby coasts, whereas those in neighboring Rennes are much less likely to. And so on. There can be no other maps quite like these in existence. . . .

Cartography of course has always been a major feature of travel atlases and tourist guides. Some of the best

collections of guides in existence are those published by Hachette ("blue guides"), Michelin ("red guides", "green guides"), Shell-Berre ("cartoguides"), etc.

Maps locating tourist attractions and suggesting travel itineraries in each region have also been published for several decades by the "General Directorate of Tourism" and its predecessor in the French government, the "General Commissariat for Tourism" (see Libeault, 1957, p. 309).

One does not usually expect historical atlases to be concerned with tourism and recreation. In their "historical atlas of contemporary France", however, Bouju (1966) have devoted an important chapter to "Information, Culture and Leisure" (pp. 174-201). The chapter brings together a fascinating set of maps from a variety of sources including many geographers (Demangeon, Ginier, etc.). It is subdivided into five sections. Section V deals with tourism proper. In particular two maps by Boyer (pp. 199-200) compare the location and relative popularity of ocean and mountain resorts for the years 1838 and 1869. Another map by Dainville (p. 201) evaluates for each department the number of people engaged in camping in 1963.

But topics covered by the other four sections also have an important recreation component. In section I

entitled "The press and public opinion", a series of maps reveals that since the advent of radio and television, newspapers with strong political opinions have gradually been superseded by less outspoken dailies. At the same time a "recreative press" has sprouted alongside regional newspapers and specialty magazines aimed at a specific market: women, farmers, etc. It appears that the French press has largely surrendered its traditional role of opinion molder and is now competing against electronic media in the field of entertainment. The next section appropriately examines the diffusion of radio and television in France.

Section III looks at sports and games. One map (p. 188) shows how the country is regionalized according to the type of festival held locally. Each pays traditionally fancied its own game (bowling, cock-fights, archery, bull and cow races, etc.) around which popular feasts were eventually organized. The resulting pattern is found to be correlated with linguistic zones. Numerous other maps in this section portray the distribution of cycle racing-tracks, rugby and football clubs, swimming pools, marinas and a variety of other specialized facilities ranging from boxing rings to fencing-schools.

Section IV traces the evolution of tastes and opportunities in the performing arts. Of particular interest

are three maps (pp. 194-195) aptly entitled "la vie parisienne" (life in Paris) which illustrate the differential development of theaters, opera houses, music-halls, ball-rooms, circuses, cinemas, etc. in the metropolis between 1867 and 1965.

Finally, another section elsewhere in the atlas is concerned with communication and transportation networks and traffic movements (pp. 69-82) and is therefore related to tourism and recreation.

According to Meynier, French geography is now characterized by a concern for global geography. By this he meant that the profession is becoming more eager to study areas outside continental France. Considering the publication trends in the Annales de Géographie, McDonald (1965) also noted an "increasing diversity of regional interest, with particular emphasis on Western Europe (France excepted) and Latin America" (p. 139). In a previous section of the paper (see pp.43 ff.) a similar interest for foreign places was exposed although it seems that Latin America has been neglected in recreation studies.

But the concern for global geography may be interpreted quite differently to mean a renewed interest in what geographers from other nations are doing. Desbarats (1975)

observed that:

In 1972, the first year of its publication, l'Espace Géographique owed 48 percent of its reference to works originally published in English, as against 47 percent of works originally published in French (p. 12).

Again the same trend is apparent in recreation studies. It can be seen, for instance, in attempts to compile international working bibliographies (e.g. Brière, 1962, but especially Baretje, 1965 ff.). These bibliographies are not only international but also interdisciplinary.

Similarly, Cribier (1971) devoted in the Annales de Géographie an article to recreation geography in Anglo America. The two points she stressed may give some indications as to the new directions in French recreation geography: the building of theoretical models to explain the spatial structure of recreation and the study of environmental images of recreationists.

Inasmuch as French geography is currently going through

the same accelerated evolution that North American geography underwent some twenty years earlier, with the same controversies producing similar factions, and arguments being expressed with equal intransigence by the parties involved (Desbarats, 1975, p. 7),

it might appear that the conceptual differences now

separating the two schools would tend to vanish. Likewise, Cribier's interest for North American recreation geography could be interpreted as a sign that French recreation geography will be converging towards its counterpart overseas. However, there are indications that such a merger is not for tomorrow. For one thing, the French--and the European--recreational behavior will probably remain a breed of its own because of differences in culture, land resources, economic opportunities, etc. In turn, French recreation studies will reflect the pressure of local circumstances, impeding the development of a truly international geography of recreation.

On the other hand, a cursory examination of recent French works using American concepts and methods readily reveals that such imports tend to be adapted and integrated in the mainstream of the French tradition rather than copied blindly in a sort of band-wagon effect. Les paysages urbains by Rimbart (1973) provides a convincing example of this way of handling models borrowed from the "new geography". Furthermore, this book again shows that French recreation geography is inseparable from French geography as a whole.

Rimbart is at once a geographer, cartographer, quantifier, environmental psychologist and gifted writer. Currently a researcher at the French Centre National de la

Recherche Scientifique, she also lectured at universities in France, Switzerland, Venezuela and Canada where she became familiar with North American geography. Her book which purports to be an introduction to urban geography constitutes in fact a psychoanalytic interpretation of urban landscapes as they are seen through the eyes of pedestrians, developers, designers, urban theorists and so on, as well as a rather dense review of literature on urban morphology in various disciplines and languages. Assuming that "a city is much more made out of ideas than of bricks" (p. 8), Rimbert describes how urban forms materially reflect the mental images, that is ideologies and archetypes held by city builders, whereas the urban environment of the city dwellers is also largely imaginary and dependent upon attitudes previously developed.

Yet, Chapter I of the book, entitled "The city of poets and tourists," is by itself an important contribution to recreation geography. The two basic attitudes of people towards the urban environment, i.e. city-loving and anti-urban, are compared through a content analysis of selected novels and poems and advertising materials selling tours in foreign places.

Rimbert suggests that poetic images of the city tend to be synthetic and complex while on the contrary

tourists view the city analytically. Poets interpret the city and the urban way of life not as made out of discrete elements but as a unique transcendental phenomenon. Hence, poetically, one is led to either love or hate the city in a global fashion. But for tourists, "the detail is what differentiates cities and arouses curiosity" (p. 45). Tourists therefore may simultaneously hate one city and by comparison love another or they can love some aspects of the city and hate others.

This "difference effect" (ibid) constitutes the prime mover of the tourist industry. Tourist promotional materials typically appeal to three fundamental motivations:

1. the desire to escape;
2. the search for dépaysement;¹ and
3. the need for reassurance and security.

¹ Although it is widely used in the French literature of recreation, the concept of dépaysement has no direct equivalent in English. Literally, it is the state of being removed out of one's birthplace or natural element. It can be defined as a sort of cultural shock which temporarily destroys all usual frames of reference. In a recreational context, dépaysement is a highly rewarding experience and can be compared to psychedelic drug-taking. Upon arriving in a foreign environment, the tourist is faced with high-density "mind-expanding" images. At the same time, a kind of voluptuous panic is inflicted as control over the dread of the unknown is gradually achieved. It is interesting to note that drug users refer to psychedelic experiences as "tripping," i.e. as mental tourism. In connection with this study, it is also tempting to ask why no such concept as dépaysement has evolved in the English language.

Thus, advertising agencies show life in the city as hell, a rat race, a prison, where noise, congestion, harassment, etc. combine to demonstrate "a sort of urban failure" (idem, p. 46). In order to keep one's sanity, one must therefore get away from it all. By way of contrast touristscapes are shown to provide the desired dépaysement. The proposed dépaysement is climatic when the tourist is invited to some sunshine coast during the winter season. It is temporal when the historical resources of past landscapes are promoted. Vacationists spending their holiday in luxury hotels and restaurants are more often than not experiencing a form of social dépaysement while casinos, sex shops, opium houses, etc. supply "legal dépaysement". But dépaysement is also a powerful source of anxiety which inhibits the desire to travel, so that a most important role of travel agents is to sell security in various forms. Among the examples discussed by Rimbert (pp. 54 and 55) are hotels or marinas "where everything is taken care of" translation services, the organization of itineraries, the lavish use of commonplace stereotypes like nicknaming Leningrad the Venice of the North, or Sopot the Polish Cannes, etc.

It can be appreciated from the foregoing discussion that Les paysages urbains is altogether an essay on city forms, a contribution to the so-called "perception studies"

in geography, and a theory of tourist motivation. Contrary to the French tradition, the work is carefully documented and the author is fully aware of recent literature and especially North American writings. In this sense, the book is a forerunner. Nevertheless, Rimbert's use of concepts and methodologies borrowed from behavioral geography would be considered on this continent as rather freehanded if not unscientific. Her generalizations, however brilliant and fertile, are still largely reliant on intuitive insight and quick inference. Thus, her work is truly representative of classical French scholarship.

Inasmuch as Rimbert's book will not remain an isolated case, it probably points to some of the directions which will be followed by French recreation geography--indeed French geography as a whole--that is, a continued affection for holism and increased interest for what other national schools are doing. One may therefore expect bold reinterpretations of North American concepts in the French fashion and Meynier's "period of creaking" (see above) could be followed by a period of solidification of French geography.

SUMMARY AND CONCLUSION

Few geographers today would deny that communications between the various national schools of geography have generally been far from satisfactory. In particular, North American geography, whose foundations were laid down mainly by German and British scholars, has paid little attention to French geography, especially since the emergence on this continent of the so-called "new geography".

This deficiency is most noticeable in the field of recreation geography. While North American and French sociologists concerned with leisure occasionally have an opportunity to read the others' works through satisfactory translations, North American geographers involved with recreation remain largely ignorant of what their French colleagues are doing. This essay has been an attempt to correct this anomaly.

More specifically the study has sought to show the place of recreation and tourism as a geographical interest of the French school, and to examine the setting, the basic paradigms and methodologies, and generally, the evolution of recreation studies in French geography. For this purpose relevant materials have been grouped under five headings:

(1) early studies; (2) studies mainly concerned with theoretical considerations and research techniques; (3) regional and case studies; (4) planning and normative studies; and (5) studies pointing to other trends and new directions. Early studies indicate that tourism is an old concern of the French school. French geographers at the turn of the century somewhat considered themselves as tourists with a scientific mind writing for an audience which could not afford to travel away from home. In the 1920's however, they began to realize that tourism was becoming a mass phenomenon with tremendous economic and cultural implications.

In recent decades, French geographers have become more conscious of other aspects of tourism and recreation and particularly of the epistemological and methodological aspects of a geography of recreation. Considerable efforts have been made to properly define the basic concepts and typologies of a science of recreation and tourism, but the French geography of recreation cannot be deemed to be nomothetic in any real sense. The most interesting contribution of the French methodological works has been the development of indirect ways of measuring tourism. For instance, the use of "consumption indices" have enabled geographers to show how population distributions fluctuate during holiday periods, to identify which regions are

temporarily gaining and which are losing population as a result of tourism, and to measure the relative attractiveness of individual tourist regions.

Regional monographs constitute the hallmark of French geography. Similarly, French recreation geography is basically a regional geography. Tourist regions have been identified and described. The impact of outdoor recreation and tourism on regional economies has been studied. The nature and structure of tourist flows within and between specific regions have been examined. Typologies of recreation spaces have been devised. Urban recreation hinterlands have also been explored. In terms of regional coverage, the French alpine regions have been particularly well covered in the literature, followed by the major coastal zones of France. French geographers also have been keen students of recreation in other regions of Western Europe and elsewhere, whereas Belgian, Swiss, French Canadian and North African geographers have likewise published many valuable monographic studies of recreation in their respective countries. Perhaps the most interesting contributions of the French regional geography of tourism and recreation have been those studies dealing with winter sports regions as well as those looking at the distribution and use of second homes and recreational housing, two research concerns which have been relatively neglected on this

continent.

French geographers have been sharply critical of recreation planning. Their works repeatedly stressed the need for more serious recreation planning both in a broader regional and national context and with finer analytic tools on the local level. More specifically, French geographers endeavored to promote "social tourism", that is to increase the participation of lower social strata in leisure activities, and at the same time, to improve the quality of the recreation experience which has been shown to be more often than not alienating and frustrating. Although tourism is a major element of any regional development policy in France, it is also a most controversial element. French recreation studies have placed great emphasis on the conflicts generated by recreation and tourism which are viewed as highly imperialistic activities both socially and economically.

If the more recent studies of French geography are indicative of what the field will be like during the next decade, then two major directions are apparent. First, French recreation geography will remain closely in tune with French geography as a whole. The basic characteristics of the French traditions, that is the holistic approach, the tendency to be descriptive and regional, the predilection

for elaborate and beautiful cartography, etc., will continue to be valid descriptors of most recreation studies, and to be sure, of other geographic works which are only incidentally concerned with recreation as it is often the case with French geography. On the other hand, improved opportunities for communication--and willingness to communicate--are now paving the way towards the accelerated acceptance in France of concepts and methodologies developed in North America and elsewhere. However, rather than a significant convergence of research orientations of the French and other nations' geographies of recreation, one will probably witness instead a reinterpretation of the borrowed elements so that the originality of the French approach of recreation problems will be preserved despite its rapid expansion.

At this stage of the paper, it is tempting to try to encapsulate in a few general observations how and why French recreation geography fundamentally differs from its American counterpart. A salient difference between French and North American recreation geographies lies in their respective vitality. In terms of sheer volume of production, French geographical studies dealing directly with tourism and recreation outnumber equivalent Anglo-American works two to one (compare the bibliography with Lancaster and Nicholls, 1971). Of course this says nothing about the quality and scope of the works, but it is an indication that French

geographers have been more concerned with tourism and recreation than North American geographers.

One reason for this differential involvement stems from contrasting attitudes towards leisure and recreation. North American society never fully emerged from the grip of the Puritan work ethic. In North America, recreation has been essentially conceived as necessary breathing-time between periods of toil, and perhaps as a reward one must deserve. Pleasure for its own sake was a sin. Likewise, recreation research lagged because it was deemed to lack seriousness. In French-speaking Europe, philosophers have professed the desirability of leisure--even idle leisure--for generations.

Another reason why French geography has been so productive is connected with the French perception of tourism and recreation as a field of scholarly enquiry. In the French literature, the geographic character of recreation studies is repeatedly stressed. Leisure activities are viewed as a product of geography, that is as a dynamic resource system involving multifarious elements of the human and physical landscapes. In turn, recreation is also seen as a genetic factor of geography, for it is an economic force which creates jobs and shapes the character of places. Likewise, tourism is considered as a major

social phenomenon which must be studied objectively, but also as a sponsor of geographic work. In that sense, the regional monograph constitutes a sort of glorified tourist guide.

Another striking difference between French and North American recreation geographies is connected with the emphasis placed by the French upon the study of tourism whereas North Americans are more concerned with outdoor recreation. However, this difference of emphasis is easily misunderstood unless it is realized that the terms tourism and recreation are used almost interchangeably by French geographers whereas they constitute a clear-cut dichotomy in American literature. In France where tourism is understood as a type of temporary migration motivated by recreation, tourism research has come to mean the study of any form of recreation which occurs away from the recreationist's domicile. In North America, the tourist is primarily seen as a consumer and client of the travel industry. Whether the tourist travels strictly for pleasure or not is a secondary consideration. As a consequence, North American recreation geography focuses on recreation behavior as distinct from tourism.

Such conceptual differences reflect the cultural traits of two societies more than the trivial idiosyncrasies

of two schools of geographical thought. If the interest of recreation geographers in North America has been directed to large outdoor recreation areas or belts while French geographers have emphasized the study of places and systems of places, it is largely due to the fact that North American and West European recreational behaviors are fundamentally different in many respects.

Other differences between the two approaches similarly follow. In France, tourism being viewed as a migration, recreation studies have been much concerned with measuring flows and assessing the impact of tourism in "departure zones" as well as in "hosting zones". In North America, where tourism is a branch of industry and recreation a subjective experience, more research emphasis has been placed upon demand studies and more recently upon motivation, attitude and perception studies.

In France, tourism is largely urban and equipment-oriented, and geographers give a lot of attention to the sleeping accommodations and sports facilities of spas and resorts. In North America, the study of outdoor recreation is nature-oriented and essentially deals with water resources and wilderness.

In France, tourism is viewed as a tool for economic

development. Thus a large number of studies are concerned with the benefits of tourism, but also by the negative impact of improper recreational development on the life of local communities. In North America, the conflicts studied have not mainly been those occurring between local people and visitors, but those opposing different categories of recreationists, e.g. canoists versus motor-boaters.

In France, geographers have worked towards increasing the participation of people in leisure activities. At the same time, they have endeavored to find ways of spreading holiday peaks in order to maximize the use of recreational resources. By comparison North American geography tends to be elitist inasmuch as it focuses on preserving the quality of the recreational experience by fighting to preserve the natural environment against the attacks of ever-increasing numbers of recreationists.

In France, more emphasis is put upon the study of faraway holidays and extended vacations, hence the well developed interest for second homes and the numerous monographs of tourist centers. North American geographers instead have been more concerned with day-trips and closer to home outings.

A final comparison appears to be especially

significant even if it stems from contrasting geographical traditions proper rather than from differences in the behavior of French "tourists" and North American "recreationists". This essay stressed the point that French recreation geography is only artificially a subfield of geography as a whole. Hence, French recreation geography displays the same characteristics and concerns as the field at large and French recreation geographers are geographers before being students of recreation.

Quite the contrary, North American recreation geography appears to be a rather distinct and specialized subfield. To be sure this subfield still basically partakes of the same trends as other branches of North American geography. For instance, it belongs to the "new geography" and favors a thematic and theoretical approach. But, on this continent, "outdoor recreation exemplifies the concept of a multidisciplinary field of study" (Lancaster and Nicholls, 1971, p. 2). Thus one may wonder how far will North American recreation geography move away from geography as a discipline.

The above generalizations are of course selective and the comparisons sketchy. The discussion sought to show that the French and North American recreation geographies differ fundamentally in their approach of the recreation

phenomenon. However, although the accent has been placed upon contrasts, the differences between the two schools are often complementary rather than divergent. Scholars have written perceptively about recreation in both cultural realms. That they generally have missed their respective insights in the past should serve as no deterrent to a much expanded professional dialogue between French and North American recreation geographers in the future.

APPENDIX I

LIST OF MAJOR FRENCH-LANGUAGE JOURNALS OF GEOGRAPHY
WITH TITLE ABBREVIATIONS USED IN THE BIBLIOGRAPHY

| <u>Title</u> | <u>Abbreviation</u> |
|---|---------------------|
| Acta Geographica | Acta |
| Annales de Géographie | Annales |
| Annales de la Faculté des Lettres et Sciences Humaines de Nice | A.F.L.S.H.N. |
| Atlas | Atlas |
| Bulletin de l'Association des Géographes de l'Amérique Française | B.A.G.Am.Fr. |
| Bulletin de l'Association des Géographes français | B.A.G.F. |
| Bulletin de la Société Belge d'Etudes Géographiques | B.S.Belge |
| Bulletin de la Société de Géographie de Lille | B.S.G.Lille |
| Bulletin de la Société Géographique de Liège | B.S.G.Liège |
| Bulletin de la Société Languedocienne de Géographie | B.S.Lang. |
| Cahiers de Géographie de Besançon | C.G.Besançon |
| Cahiers de Géographie de Québec | C.G.Québec |
| Cahiers d'Outre-Mer | C.O.M. |
| Cahiers de Tourisme | C.T. |
| L'Espace Géographique | Espace |
| Le Géographe Canadien | Can.Geog. |

| | |
|---|------------|
| L'Information Géographique | Info. |
| Méditerranée | Méd. |
| Norois | Norois |
| Revue Belge de Géographie | R.Belge |
| Revue de Géographie Alpine | R.G.Alpine |
| Revue de Géographie de Lyon | R.G.Lyon |
| Revue de Géographie de Montréal (initially Revue Canadienne de Géographie) | R.G.Mtl. |
| Revue de Géographie du Maroc | R.G.Maroc |
| Revue Géographique de l'Est | R.G.Est |
| Revue Géographique des Pyrénées et du Sud-Ouest | R.G.P.S.O. |
| Revue de Tourisme | R.T. |

APPENDIX II

RELATIONSHIP BETWEEN FRENCH "GEOGRAPHY"
AND "TOURISM" IN 1881

Following is the table of contents of volume IV (1881) of Le Bulletin de la Société Languedocienne de Géographie. Notice the diversity of interests, a definite taste for the exotic and unusual, the number of articles (marked by an asterisk) which are obviously travelling accounts and an early concern for the study of tourism (article by Alric). Other early volumes of the journal essentially display the same characteristics.

Cons, H.: "Introduction à l'étude de la géographie physique de l'Europe". pp. 1-27.

*Soleillet, P.: "Journal de voyage du Sénégal à l'Adrar exécuté par ordre de M. le ministre des Travaux publics en 1880". pp. 28-73 (suite).

Soubeiran, J.-L.: "La Birmanie et les Birmans". pp. 74-110.

Podolensky, S.: "Oucraine. Ethnographie, statistique et état sanitaire". pp. 111-132. "Propriété foncière et agriculture. Les conditions sanitaires des populations". pp. 199-215.

Convert, F.: "Les canaux d'irrigation dérivés du Rhône". pp. 165-174.

Bordier, D.: "Java. Le Temple de Bôrô-Boudour". pp. 175-198.

Corbière, P.: "Des glaciers et de leur dissémination à la surface du globe". pp. 216-232.

*Gorloff de.: "Mon accident au Mont Blanc". pp. 233-236.

Seignette, P.: "Les Albères. Etude géographique, orographique et hydrographique". pp. 301-351.

Azaïs (Abbé): "Deux menhirs sur les montagnes de Fraïsse, (canton de la Salvetal)". pp. 352-355.

Coillard: "Du pays des Bassoutos au Zambèze". pp. 356-374.

Hoben de: "Notice sur la république de Costa-Rica". pp. 375-378.

Alric, A.: "Les pèlerins musulmans au tombeau de Moïse". pp. 379-397 et pp. 505-526.

Soubeiran, J.-L.: "Les Pyrénées-Orientales et leur hydrologie". pp. 429-438.

*Collot, L.: "Notes d'un naturaliste à bord de la Junon". pp. 439-487.

*Brunon: "Journal d'un voyage dans les possessions françaises de la côte occidentale d'Afrique". pp. 488-504.

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- Babulle, R., 1964: Essai sur le tourisme. Limoges: Rougerie. (327 pp.)
- Balseinte, R., 1955: "Les stations thermales françaises". R.G.P.S.O., 4, pp. 292-306.

1. Titles of the major French-language journals of geography have been abbreviated following the schedule produced in Appendix I.

- Balseinte, R., 1958: "Les stations de sports d'hiver en France". R.G.Alpine, 46, pp. 129-181.
- 1959: "Mégève ou la transformation d'une agglomération montagnarde par les sports d'hiver". R.G.Alpine, 47, pp. 131-224.
- 1959-1960: "L'essor récent des sports d'hiver dans le Tyrol autrichien de 1955-1956 à 1959-1960". R.G.Alpine, 49, pp. 537-577 and 50, pp. 281-291.
- 1964: "L'évolution démographique des stations de sports d'hiver françaises de 1954 à 1962". PP. 29-33 in Centre des études supérieures du tourisme.
- 1966: Climats montagnards et stations climatiques d'altitude en France. Paris: Fabre. (527 pp.)
- Barbaza, Y., 1966: Le paysage humain de la Costa Brava. Paris: Armand Colin. (717 pp.)
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